



**THE
FOURTH
MALTESE
MEDICAL SCHOOL
CONFERENCE**

**10 MARCH – 13 MARCH 1999
MEDITERRANEAN CONFERENCE CENTRE,
VALLETTA, MALTA**



**IVTH MALTESE MEDICAL SCHOOL CONFERENCE
MEDITERRANEAN CONFERENCE CENTRE
10TH TO 13TH MARCH 1999**

| | | Republic Hall | Boffa Hall |
|----------------------------------|------------------------------------|---|---------------------------------------|
| Wednesday 10th | 1700 | OPENING REMARKS Dr. Joseph L. Pace | |
| | 1710 – 1900 Coffee Break | 1 Biomedical Sciences I | 1 Free Communications |
| | 1930 – 21.30 | 2 Biomedical Sciences II | 2 Family Practice |
| Thursday 11th | 0830 – 1030 Coffee Break | 3 Medicine I | 3 Oncology |
| | 1100 – 1300 Lunch | 4 Medicine II | 4 UNAIDS I |
| | 1430 – 1630 | 5 Cardiovascular | 5 UNAIDS II |
| | 1630 – 1730 | 6 Health & Work | 6 Pathology I |
| | 1830 1930 | OPENING CEREMONY RALPH ARRIGO LECTURE by PROF SIR ALFRED CUSCHIERI | |
| | 2015 | RECEPTION | |
| Friday 12th | 0830 – 1030 Coffee Break | 7 Surgery I | 7 Obs & Gynae I |
| | 1100 1300 Lunch | 8 Surgery II | 8 Obs & Gynae II |
| | 1430 – 1630 | 9 Psychiatry | 9 Radiology |
| | 1630 – 1730 | 10 Dermato-venereology | 10 Pathology II |
| | 1730 – 1930 | 11 Health Care Priorities | 11 Pharmacy/General Poster Session |
| | Saturday 13th | 0830 – 1030 Coffee Break | 12 Paediatrics I |
| 1100 – 1300 | | 13 Paediatrics II | 13 Surgery III |
| 2030 | | CONFERENCE DINNER Westin Dragonara Resort, St. Julians | |

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Prof. M. Brincat, Dean

Dr. J.L. Pace, Conference Chairman

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Organising Committee

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Cover

Christ - red chalk, 116 x 90 mm, National Museum of Fine Arts, Malta, inv. 313-4 by Mattia Preti.

Mattia Preti (1619-1699) was Italian by birth but he spent the last forty years of his life in Malta as a knight of the order of St John. He spent most of this time embellishing the Cathedral, a masterpiece of Baroque art, but he also filled most of Malta's older churches and several other buildings with his magnificent art. The Fourth Maltese Medical School Conference is being held two months after the tercentenary of his death.

This drawing was selected because this conference is being held two thousand years after the birth of Christ. The bright face of this young man seems filled with hope and light. It is a preparatory study of the figure of Christ in the Baptism in the vault of St John's Co-Cathedral in Valletta. Malta and Maltese medicine have very close links with the Roman Catholic church.

The drawing was recently exhibited at the *L'Idea del soggetto* exhibition and is reproduced with the kind permission of the curator of the Fine Arts Museum.

Gordon Caruana-Dingli

Foreword

Dear colleagues,

I would like to warmly welcome you all to the IV Maltese Medical School Conference. When these conferences were started some years ago, its founding fathers wanted us to have a local forum that would encourage the Maltese medical community to pool their resources in a great triennial jamboree. This meeting is the showpiece of our Medical School. We know how difficult it is to carry out research locally. We also know that our graduates and our fellow Maltese do well when they have the right opportunities and resources both locally and abroad. Malta has the advantage of having had a large number of medical personnel who have trained overseas for a long period of time. This has provided a large group of extremely well trained practitioners and scientists who by coming back to Malta have had the vision to realise that good research can be carried out anywhere. A good brain with a good imagination can always be creative no matter what the facilities. Fr. John Fsadni OP, one of our theological scholars on the Island was asked how he reconciled his detailed research on philosophical matters with his best selling well researched book on the Maltese 'girna' (the local beehive stone hut of unknown antiquity). His answer was very clear. Once he had been endowed with an inquisitive mind and well trained in the discipline of research, research was research whatever the subject, providing that this was looked at in depth and no short cuts were taken. I feel that this contained the essence of the discipline needed as a research worker. We have to aim to look into something in depth and be ready to train hard to learn the discipline of carrying out research. Without that discipline we cannot call ourselves professional. Even if we are not in a position to carry out such research ourselves, we have at least got to be able to analyse data, process information, even that given on Internet and evaluate that data in a scientific and professional manner. Without that discipline, one's opinion would be worthless, no more valid than idle gossip at a hairdresser's which as everyone knows is the alternative university.

An exceptional number of papers was submitted to this meeting. If anything, it shows that despite an abject lack of resources, including that most precious one of all - time - there is a pool of talent here that can perform and indeed at times does exceptionally well and achieves high standards.

Add to this, the superb number of overseas colleagues that have come to join us and to share the most recent information and trends in their subspeciality and we have what we hope will be a perfect mix. We look forward to having a valuable meeting that should help us all and give us the confidence to keep on building our Medical School in the future. I am grateful to all our distinguished overseas guests for coming to Malta to join this family reunion.

I would also like to welcome the not insignificant group of overseas Maltese who have decided to join us at this particular time. This is reminiscent of the 'gathering' that the Knights of St. John used to have from time to time when in answer to a summons, Knights would come from all over Europe to Malta. Our Medical School owes a deep gratitude to the Knights of St. John and this is one tradition that we are only too happy to imitate. Maltese doctors have always travelled extensively. I sincerely hope that this tradition will continue, and I am happy to say that it shows no sign of abatement. Anybody who knows us knows that despite being an Island, the Maltese Medical Profession is the best travelled and the most outward looking profession on the Island.

I wish you all a happy and successful conference

Professor MP Brincat, PhD(Lond), FRCOG
Dean, Faculty of Medicine & Surgery
University of Malta Medical School

Dear colleagues,

It is with the greatest of pleasure that I welcome all participants to the IV Maltese Medical School Conference.

In the ten years since the milestone I Maltese Medical School Conference in 1988, much has changed in Medicine generally and in Maltese medicine in particular. Prof Fenech, our Dean and Professor of Medicine seemingly for ever has left the driver's seat with Prof Brincat bringing a new era of endless energy and innovation. For the first time a substantial number of overseas students mostly from Norway are here for more than the weather and their presence enriches our school and spurs us to new heights. Technical achievements such as coronary bypass surgery, renal transplantation, laser surgery, and joint replacement have become commonplace procedures giving excellent results and well within the expectations of our people.

In common with every advanced society, Malta is feeling the need to offer its citizens the fruit of medical achievements as soon as possible after they occur but at the same time keeping an eye on an ever expanding health budget attributed chiefly to the success of medicine in keeping us alive longer and longer. As in all other European countries, manpower problems in both medical and nursing fields are proving difficult to remedy satisfactorily despite serious and valid attempts in this direction with the seemingly endless vicious circle of *progress-good results-more staff and resources-more patients* appearing insurmountable. Indeed *Setting Health Priorities* was identified as of greatest importance in his inaugural editorial in the Journal of the Royal College of Physicians of London by a great friend of Malta and a participant at a past Medical School Conference, Dr Peter Watkins. Thus, *Priorities of Health Care* will figure in a session in its own right at a time when here too an on-going national debate is starting to take place. It is good that such discussion about Priorities takes place with the involvement of ALL concerned since not to do so will result in rationing declared or otherwise, a measure which has rightly been termed unethical by the World Medical Association.

With the restrictions of living on a small island, Malta's doctors have since time immemorial found it profitable to spend periods of time abroad usually coming back to the lure of family and weather but sometimes, like Barth earlier and Cuschieri later, settling down to a chequered career in distant lands. With Europe beckoning, it is very important that our medical standards are and remain comparable to the best in the continent. To that end many of us have worked hard and diligently to ensure that we are represented at the various fora both purely academic such as the UEMS and specialist societies, and also medico-political such the Standing Committee of Doctors of the EU. Through personal sacrifice and often personal funding an increasing number of us are well in touch with medical Europe and others have ventured beyond. This must be encouraged across the board by those who have the interest of the profession at heart. The Malta session of the MRCP Part I and Australian College of Pathologists may soon be joined by the FRCS examination and we augur that discussions that will take place concurrently with this meeting achieve a fruitful outcome. We now have a substantial number of doctors training in various disciplines in the US including the Mayo Clinic where thanks to the reputation of those who have gone before, such as Michael Camilleri, there are several Maltese doctors achieving high grades in Dermatology (another Michael Camilleri), Clinical Haematology, Endocrinology, Gastroenterology, and other disciplines. Others have trained at Jefferson Medical College in Philadelphia following a bilateral agreement of co-operation. Together with this eminent medical school, Carmel Mallia and I organised the RheumaDerm dialogue congresses which have proved highly successful with the Millennium edition due in 2001. Others are training in European countries and here I wish to mention the UK in particular where in spite of problems because of Malta not being yet an EU member, British colleagues have left no stone unturned in efforts to help our promising young men and women.

At this "time of change and changes" as Peter Watkins so aptly put it, it is particularly important that our medical profession continues its fine tradition of excellence which we hope to demonstrate during this meeting, together with our related necessity of being ever more outward looking, maintaining and strengthening known contacts and concurrently seeking fresh ties in foreign shores - a process of cross-fertilisation of knowledge and ideas vital to our survival in these exciting and exacting times.

Joseph L Pace
MD FRCP(Edin) FRCP(Lond) FCPP FAAD KM
Conference Chairman

ORGANISING COMMITTEE

Dr. JL Pace – Chairman
Prof. CL Cutajar
Prof. MP Brincat
Prof. FF Fenech
Prof. AE Felice
Dr. P Vassallo Agius
Dr. C Mallia
Mr. A Zammit
Mr. G Caruana Dingli
Mr. A Agius
Dr. P Sciortino
Ms. L Saliba
Ms. H Camilleri Formosa
Ms. J. Grima
Mr. C Borg Galea

ACKNOWLEDGEMENTS

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University of Malta
Medical & Health Department
The Ralph Arrigo Foundation for supporting Prof. Sir A Cuschieri
The Corinthia Paediatric Research Fund for supporting Prof. M Dillon
BMA (Malta Branch) for supporting Prof. L Rees
Gasam Group of Companies for supporting the Surgery I session

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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Republic Hall: Session 1**Wednesday, 10th March 1999**

1700

Dr JL Pace**OPENING REMARKS****Chairman, Organising Committee
IV Maltese Medical School Conference****BIOMEDICAL
SCIENCES I****BMS I 01-05 Chairmen: Professor A Cao, Professor AE Felice**

| | | | |
|------|------|----------------------------|--|
| 1715 | R273 | Cao A | Genomics after 2000 |
| 1745 | R274 | Felice A | DNA at the bedside: from Thalassaemia to diagnostic molecular genetics |
| 1805 | R275 | Wilson A | The biology of ovarian cancer |
| 1825 | R276 | Muscat R | The scientific basis of Hedonism |
| 1845 | R257 | Hunter GJ, Hunter T | Oxidative stress, chaperones and superoxide dismutase |

Coffee Break**Republic Hall: Session 2****Wednesday, 10th March 1999****BIOMEDICAL
SCIENCES II****BMS II 01-11 Chairmen: Professor A Cuschieri, Professor J Bannister**

| | | | |
|------|------|--|---|
| 1930 | R210 | Sammut S, Muscat R | Recombinant human IFN- α A modulates dopamine release in the nucleus accumbens |
| 1940 | R213 | Frey H | Characterization of a copper detecting chemical modified glassy carbon electrode |
| 1950 | R203 | Schembri Wismayer P, Jamieson T, Birnie G | C/EBPe and GABP up-regulate the activity of the defensin gene promoter, as does the process of myeloid maturation into granulocytes |
| 2000 | R094 | Gatt M, Cuschieri A, Agius Muscat H | The Malta congenital anomalies register: analysis of data 1993-1997 |
| 2010 | R179 | Sant R, Hahn S, Holzgreve W | Isolation of fetal cells from maternal circulation |
| 2020 | R207 | Pulis S, Micallef E, Bonello S, Galdies R, Felice AE | A study of genetic and non-genetic factors leading to a variation of γ Gamma globin gene expression in newborns |
| 2030 | R122 | Micallef M, Ellul Micallef R, Kurimoto M, | Interleukin 18 enhances T helper type 1 cytokine production by enriched human T cells: synergism with interleukin 12 for interferon gamma production in vitro |
| 2040 | R218 | Scerri C, Xuereb A | Bone metabolism and bone mineral density in patients with Thalassaemia Intermedia |
| 2050 | R200 | Al-Ashtar A, Al-Shinawi C, Bezzina Wettinger S, Blundell R, Scerri C, Grech G, Vella J, Felice AE | Human GM ₁ -gangliosidosis identification of two point mutations in IVS 7 in two Maltese families |
| 2100 | R092 | Cuschieri A | An international study of congenital anorectal atresias |
| 2110 | R202 | Farrugia R, Dianzani I, Falzon L, Bezzina Wettinger S, Attard Montalto S, Felice AE | Dihydropteridine reductase deficiency, a rare variant form of phenylketonuria: a study of three families carrying this disorder |
| 2120 | R208 | Rapinett G, Rusted J, Muscat R | Alzheimer's patients can still make tea: memory deficits and daily activities |

Boffa Hall: Session 1**Wednesday, 10th March 1999****FREE
COMMUNICATIONS****FC0 01-08 Chairmen: Dr A Vassallo, Mr JN Casha**

| | | | |
|------|------|--|---|
| 1715 | R015 | Vassallo D | Defence medical services telemedicine unit – Activity Summary 1998 |
| 1725 | R246 | Pace JL | Scabies resistant to topical treatment – cure with ORAL therapy |
| 1750 | R065 | Galea I, Farrugia E | Renal osteodystrophy in Maltese end-stage renal failure patients |
| 1800 | R240 | Casha JN | Functional assessment of bilateral amputees |
| 1815 | R106 | Brincat A, Camilleri-Podesta MT, Micallef-Hawkes L, Ali S | Review of violent deaths caused with criminal intent (factor involved in murder cases) in Malta over a twenty year period from 1979 to 1998 |
| 1825 | R107 | Micallef-Hawkes L, Camilleri-Podesta MT, Brincat A, Borg HK | Audit Study – Relevance of anatomy teaching to medical student attending the medical course at the University of Malta |
| 1835 | R078 | Aquilina A, Azzopardi N | Post-operative analgesia revisited: 1973-1998 |
| 1845 | R099 | Buhagiar J, Camilleri Podesta MT, Ali S | In vitro induction of apoptosis by the conifer Tetraclinis articulata essential oil: possibilities for use as an anti-neoplastic agent |

*Coffee Break***Boffa Hall: Session 2****Wednesday, 10th March 1999****FAMILY PRACTICE****FAP 01-05 Chairmen: Professor H Lamberts, Dr D Soler**

| | | | |
|------|------|----------------------------|---|
| 1930 | R138 | Lamberts H, Okkes I | General Practice, the key to health care in a new era |
| 2000 | R112 | Soler D, Soler JK | Presentation of an analysis of 500 consecutive consultations, coded with ICPC, in a Family Doctor's practice. Do they reflect the code of General Practice? |
| 2030 | R017 | Zammit R | Vision screening in Maltese 3-year old kindergarten children |
| 2045 | R247 | Pace JL | Bacteria, Antibiotics, Acne and Dermatologists ("BAA syndrome") |
| 2100 | R224 | Pollock G | Does routine childhood immunisation have to be compulsory? |

Republic Hall: Session 3

Thursday, 11th March 1999

MEDICINE I

MED I 01-09

Chairmen: Dr J O'Grady, Dr A Caruana Galizia

Infectious Diseases

0830 R260 **O'Grady J**
0900 R164 **Caruana Galizia A**
0910 R161 **Mifsud AJ**

Hepatitis C
Chronic hepatitis C and its treatment with interferon alpha 2b
Emerging infectious diseases: do all diseases have an infective aetiology?
Seroprevalence of Hepatitis A in Maltese adults

0920 R032 **Borg MA, Portelli A**

Neurology

0930 R097 **Galea Debono A, Cuschieri A**
0940 R153 **Buttigieg A, Mifsud J, Galea Debono A, Ellul Micallef R**

A survey of hereditary neurological disease in Malta
The therapeutic management of epilepsy with the newer antiepileptic drugs

Respiratory

0950 R234 **Caruana Montaldo B**
1000 R124 **Pullicino J, Montefort S, Vella A**
1010 R159 **Balzan M, Agius G**

Clinical guidelines for the initial management of adults with community acquired pneumonia
The role of indoor and outdoor airborne particulate matter in relation to asthma and other allergic conditions in Malta
Smoking behaviour with acute chest pain. How many patients go on smoking?

Coffee Break

Republic Hall: Session 4

Thursday, 11th March 1999

MEDICINE II

MED II 01-09

Chairmen: Professor L Rees, Dr J Azzopardi

1100 R261 **Rees L**

BMA (Malta Branch) Lecture:
The Royal College of Physicians (London): its role in education and international medical affairs

Diabetes/Metabolic and Endocrine

1130 R150 **Azzopardi J, Bajada C, Ellul A, Fava S, Gatt K**
1150 R027 **Fava S, Azzopardi J, Watkins P, Hattersley A**
1200 R108 **Cachia M J, Azzopardi J**
1210 R115 **Vassallo J, Cachia M, Azzopardi J**
1220 R018 **Vella A, Morris JC, Nippoldt TB**

Type 2 Diabetes Mellitus: the situation in Malta
Evidence of familial predisposition to renal disease in Type 2 Diabetes Mellitus
The new ADA and classical WHO criteria for the diagnosis of Diabetes Mellitus: should we discontinue hospital use of the OGTT
Diabetes Mellitus and its complications in Maltese patients with acromegaly
Adrenal hemorrhage: a twenty-five year retrospective review

Miscellaneous

1230 R045 **Dimech J, Fiorini A**
1240 R016 **Abela S, Fiorini A**
1250 R011 **Azzopardi C, Montefort S, Mallia C**

Utilisation of a functional assessment tool to classify suitability for admission to long-term care
An audit of patients referred to a specialized geriatric unit
Churg-Strauss syndrome with cardiac involvement and left ventricular failure

Lunch Break

Boffa Hall: Session 3

Thursday, 11th March 1999

ONCOLOGY

ONC 01-06

Chairmen: Dr S Brincat, Dr V Muscat

| | | | |
|------|------|--|--|
| 0830 | R229 | Brincat S, Muscat V | Boffa Oncology Department participation in multi-centre trials in breast cancer |
| 0900 | R127 | Debono DJ | Important concepts in the management of testicular cancer |
| 0915 | R157 | Calvagna V, Grech V, Dalmas M | Childhood acute lymphoblastic leukaemia in Malta |
| 0930 | R175 | Camilleri N, Camilleri P, Brincat S, Muscat V | ¹³¹ I Treatment of thyroid carcinoma in the radio isotope unit at Sir Paul Boffa Hospital |
| 0945 | R141 | Calleja R, Costa M, Basavaraj D, Yassari R, Sethia KK | Does follow-up make a difference in the outcome of renal cell carcinoma? |

Coffee Break

Boffa Hall: Session 4

Thursday, 11th March 1999

**HIV IN THE
MEDITERRANEAN**

Chairmen: Dr. C Mallia Azzopardi, Dr. A Amato-Gauci

| | | |
|-------------|--|--|
| 1100 | Opening Speech by Hon. Minister L Deguara | |
| | Mr. R Degiorgio, President, Sovereign Military Order of Malta | |
| | Mr. L Apap Bologna, President Rotary Club, Malta | |
| 1110 | Van de Roey J (UNAIDS) | HIV in Europe and the Mediterranean |
| 1140 | Freedman D (Dublin) | Out-patient management of the HIV positive patient |
| 1210 | Mallia Azzopardi C (Malta) | HIV in Malta: an overview |
| 1235 | Amato Gauci A (Malta) | Epidemiological aspects of HIV/AIDS in Malta |
| 1300 | Gjenero-Margan I (Croatia) | HIV/AIDS Epidemiology in Croatia |
| 1315 | Chaklikov T (Kazakhstan) | HIV/AIDS Epidemiology in Kazakhstan |

Lunch Break

Republic Hall: Session 5**Thursday, 11th March 1999****CARDIOVASCULAR****CVS 01-11****Chairmen: Professor FF Fenech, Mr A Manche**

| | | | |
|------|------|---|---|
| 1430 | R157 | Fenech A | Recent trends in interventional cardiology |
| 1450 | R102 | Galea J | C-FOS and C-JUN expression. cell proliferation and apoptosis in human saphenous vein prepared for coronary artery bypass grafting |
| 1500 | R205 | Alshinawi C. Felice A. Manners M. Wilde A | Molecular genetics of cardiac arrhythmias |
| 1510 | R171 | Xuereb R G. Xuereb M. Borg C. Fenech A | Microinfarction during percutaneous transluminal coronary angioplasty assessed by Troponin T release |
| 1520 | R119 | Manche A. Galea J. Busuttill W | Haemodynamic tolerance to ACE inhibitors after coronary artery bypass surgery |
| 1530 | R064 | Busuttill W. Vella M. Galea J. Manche A | Medium term follow-up of the first 300 cardiac surgical patients operated at the cardiothoracic unit at SLH, Malta |
| 1540 | R230 | Schembri K. Manche A. | A retrospective study of patients who were referred for coronary bypass assessment but did not undergo surgery |
| 1550 | R026 | Fava S. Azzopardi J | Circadian variation in the onset of acute pulmonary oedema and associated myocardial infarction in diabetic and non-diabetic patients |
| 1600 | R074 | Farrugia E | Conn's syndrome – a treatable cause of hypertension |
| 1610 | R012 | Azzopardi C | Current issues in the diagnosis and treatment of venous thromboembolism |
| 1620 | R228 | Serafimov V. Calleja M. Saliba K | Prospects in the treatment of DVT |

Republic Hall: Session 6**Thursday, 11th March 1999****HEALTH AND WORK****HAW 01-04****Chairmen: Dr F Grima, Dr J Cachia**

| | | | |
|------|------|-------------------------|--|
| 1630 | R030 | Schembri A | An account of the effects of solvents and exposure to these in Malta |
| 1645 | R168 | Vella N, Gauci M | Traumatic occupational fatalities in Malta |
| 1700 | R120 | Vincenti N | Noise-induced hearing loss |
| 1715 | R062 | Grima F | Short-term sickness absence: problems and solutions |

Thursday, 11th March 1999**1830****OPENING CEREMONY****1930****RALPH ARRIGO LECTURE**
Professor Sir Alfred Cuschieri**Hospital Care in the Next**
Millenium**2000****RECEPTION**

Boffa Hall: Session 5

Thursday, 11th March 1999

**HIV IN THE
MEDITERRANEAN**

Chairmen: Dr. C Mallia Azzopardi, Dr. A Amato-Gauci

| | | |
|------|---|---------------------------------------|
| 1430 | Bugeja S (Malta) | HIV: a concerted effort |
| 1445 | Micallef P (Malta) | Drug addiction in Malta |
| 1500 | Bekzatov KN (Kazakhstan) | Educational program in Kazakhstan |
| 1515 | Acanfora D (Italy) | HIV: a cure? |
| 1530 | Csonka G (United Kingdom) | Epidemiology of HIV in Eastern Europe |
| 1600 | Open discussion and conclusions – consensus statement for future reference | |

Boffa Hall: Session 6

Thursday, 11th March 1999

PATHOLOGY I

PAT I 01-04

Chairmen: Professor A Cuschieri, Professor A Cilia-Vincenti

| | | | |
|------|------|---|--|
| 1630 | R217 | Scerri CA , Bezzina Wettinger S, Buhagiar S, Grochowska A, Marwan M, Pizzuto M, Pulis S, Sammut G, Felice AE | Genotypical and phenotypical characterisation of Thalassaemia Intermedia and Major in Malta |
| 1640 | R046 | Said E , Cuschieri A | The Fragile X Syndrome in a selected population of mentally retarded individuals |
| 1650 | R095 | Cuschieri A , Said E | Ethical aspects of counselling families with familial mental retardation |
| 1700 | R259 | Cilia-Vincenti A | Pathological thoughts on the apparently diametrically opposed emerging philosophies in breast and prostate cancer therapies, and on the possibly preventive role of micronutrients |

Thursday, 11th March 1999

1830

OPENING CEREMONY

1930

**RALPH ARRIGO LECTURE
Professor Sir Alfred Cuschieri**

**Hospital Care in the Next
Millenium**

2000

RECEPTION

Republic Hall: Session 7

Friday, 12th March 1999

SURGERY I*

SUR I 01-10

Chairmen: Professor Sir A Cuschieri, Professor G LaFerla

| | | | |
|------|------|--|---|
| 0830 | R262 | Taylor I | Recent advances in surgical oncology |
| 0900 | R050 | Farrugia M K , Saliba K, Crockford M, Caruana Dingli G, Swain C | Wire-guided localisation breast biopsy – outcomes evaluation over a 20-month period |
| 0910 | R125 | Caruana Dingli G , Dalmas M | Breast cancer and looking good |
| 0920 | R139 | Swain C , Swain A | A review of 164 patients after breast augmentation |
| 0930 | R118 | Jones C H , Caruana Dingli G, Borg M A, Swain C | Hepatitis B immunization: a survey of surgeons and theatre nurses |
| 0940 | R272 | Felice F | Antibiotic prophylaxis in surgery |
| 0950 | R233 | Darmanin F X | Microsurgery in Malta |
| 1000 | R019 | Vella A , Thompson GB, Young WF | Laparoscopic adrenalectomy for the treatment of ACTH- dependent Cushing's Syndrome |
| 1010 | R163 | Degaetano J , Camilleri G E, Attard N | Intra-oral salivary gland tumours: a clinico-pathologic study |
| 1020 | R001 | Diacono MS | Osseointegrated implants: an introduction to the science and clinical application |

* This session is sponsored by the Gasan Group of Companies

Coffee Break

Republic Hall: Session 8

Friday 12th March 1999

SURGERY II

SUR II 01-10

Chairmen: Professor I Taylor, Professor CL Cutajar

Urology

| | | | |
|------|------|--|--|
| 1100 | R126 | Cutajar C L | Hormonal management of carcinoma prostate: innovations and controversies |
| 1130 | R113 | Vassallo P , Meyer K, Mattei C | Indirect computed tomographic lymphography with Imagent ^R LN (Perflubron) for assessing lymph nodes draining the prostate |
| 1140 | R089 | Aquilina K , Formosa N, Cutajar C L, Axiaq C | Shock Wave Lithotripsy in the management of urinary tract calculi |
| 1150 | R142 | Calleja R , Irving S, Costa M, Burgess N | How complete is our metabolic work-up of renal tract stone formers? |
| 1200 | R057 | German K , Fearne C | Urodynamic service at St Luke's Hospital |
| 1210 | R053 | Fearne C , Reginiano S | Rationale of hypospadias repair |

Ophthalmology

| | | | |
|------|------|------------------------------|--|
| 1220 | R252 | Coleiro J | The eye in systemic disease |
| 1240 | R049 | Fenech T | First results of phacoemulsification cataract surgery carried out in Malta |
| 1250 | R023 | Mercieca F , Dodd C L | Phacotrabeulectomy: risk factors and complications |
| 1300 | R136 | Kostrica R | Orbital reconstruction in the treatment of blow-out fractures |

Lunch Break

Boffa Hall: Session 7**Friday 12th March 1999****OBSTETRICS &
GYNAECOLOGY I****OBG I 01-06 Chairmen: Mr D Felice, Mr G Buttigieg**

| | | | |
|------|------|---|---|
| 0830 | R263 | Sallam H | Selective oestrogen receptor modulators |
| 0900 | R264 | Campbell S | Ultrasound developments in Obstetrics and Gynaecology |
| 0930 | R192 | Brincat MP , Muscat Baron Y. Galea R | Carotid artery wall thickness in postmenopausal women treated with oral oestrogens and oestradiol implants |
| 0950 | R216 | Xuereb A , Lee AJ. Hodges SJ. Hannon R. Megally N. Grima C. Scerri CA. Brincat M | A comparison of osteocalcin levels in Maltese and British postmenopausal women |
| 1000 | R178 | Butterweck A , Viorney L. Saliba C. Brincat M. Galea R. Felice AE. Serrar M. Gutierrez G | The effect of an extract of a phycophcac alga (EPP) on human breast carcinoma cells related to tamoxifen and oestradiol |
| 1010 | R191 | Muscat Baron Y , Brincat M. Galea R | Bone density and skin thickness changes in postmenopausal women on long term corticosteroid therapy |
| 1020 | R190 | Muscat Baron Y , Cipriotti M. Sciberras J. Theuma M. Theuma R. Gatt G. Gatt M. Zahra R. Muscat Baron A. Brincat M | Establishment of the stillbirth and neonatal death society (SANDS Malta) |

*Coffee Break***Boffa Hall: Session 8****Friday 12th March 1999****OBSTETRICS &
GYNAECOLOGY II****OBG II 01-08 Chairmen: Mr. F. Bonello, Mr. A. Gatt**

| | | | |
|------|------|--|---|
| 1100 | R265 | Mason H | How are insulin-like growth factors involved in follicle selection? |
| 1130 | R266 | Oram D | Screening for ovarian cancer |
| 1200 | R194 | Felice D , Tilney T | The antenatal detection of fetal anomalies at St Luke's Hospital with special reference to progress in the detection of cardiac lesion: in an ongoing study |
| 1210 | R183 | Formosa M , Brincat M | A miscarriage clinic: 5 year follow-up |
| 1220 | R182 | Bajada S , Formosa M, Brincat M | Heparin hypothesis: role in higher order multiple pregnancy |
| 1230 | R198 | Mamo J , Portelli R. Armatys A | Ambulatory versus inpatient laparoscopy |
| 1240 | R177 | Galea R , Brincat M | The effects of a marine alga on bone density in postmenopausal women |
| 1250 | R249 | Fsadni H , Avramov O. Grech A. Felice D, Brincat M | Alzheimer's disease and hormone replacement therapy (HRT) in postmenopausal women |

Lunch Break

Republic Hall: Session 9

Friday, 12th March 1999

PSYCHIATRY

PSY 01-08

Chairmen: Professor J Cox, Dr JR Saliba

| | | | |
|------|------|--|---|
| 1430 | R268 | Cox J | Perinatal mood disorder in a changing culture: a transcultural and African perspective |
| 1500 | R242 | Saliba JR | Mental Health Legislation in Malta: the rights of the patient versus those of society |
| 1520 | R251 | Holloway J | Managing the risk of aggression |
| 1540 | R221 | Cassar D, Calleja J | Behavioural family management in schizophrenia. A description and case reports |
| 1550 | R173 | Felice E, Cox J, Saliba JR | Prevalence rates and psychosocial characteristics associated with depression in pregnancy and the postpartum in Maltese women |
| 1600 | R103 | Grech A, Takei N, Murray RM | Comparison study of alcohol and illicit drug abuse in patients with recent onset psychosis in London and Malta |
| 1610 | R100 | Cassar JR, Cassar AM | Why does the Pope need a confessor? |
| 1620 | R166 | Zammit S, Sant Fournier MA, Saliba JR | Rationalising the use of SSRIs |

Republic Hall: Session 10

Friday, 12th March 1999

**DERMATO-
VENEREOLOGY**

DEV 01-04

Chairmen: Dr P Carabot, Dr D Vella Briffa

| | | | |
|------|------|--------------------------|--|
| 1630 | R268 | Freedman D | Flashpoints in sexually transmitted diseases |
| 1650 | R010 | Scerri L, Lateo S | Are the Maltese sunsmart? Some way to go |
| 1705 | R244 | Pace JL | Cutaneous leishmaniasis in the Maltese islands |
| 1620 | R009 | Carabot P | Sexually transmitted diseases in Malta: do they exist? |

Republic Hall: Session 11

Friday, 12th March 1999

**HEALTH CARE
PRIORITIES**

HCP 01-05

Chairmen: Dr JL Pace, Dr R Busuttil

| | | | |
|------|------|--|--|
| 1730 | R248 | Pace JL | Priorities in health care: the way ahead |
| 1800 | R129 | Grech KE, Azzopardi Muscat N, Darch R | Planning acute hospitals within a whole system context |
| 1815 | R154 | Tilney MK | Evidence-based medicine |
| 1830 | R098 | Azzopardi Muscat N | Will evidence-based medicine preclude rationing? |
| 1845 | R035 | Sammut MR | Tobacco control in Malta – present and future |

Boffa Hall: Session 9**Friday, 12th March 1999****RADIOLOGY****RAD 01-10****Chairman: Dr M Crockford, Dr G Kunovsky**

| | | | |
|------|------|--|---|
| 1430 | R132 | Cassar Torreggiani W. Twair A. Ramesh N, Hogan B | The first completely filmless radiology department in Ireland: is more efficient? |
| 1445 | R084 | Mizzi A. Vassallo P | The diagnostic value of ultrasound and scintigraphy in the investigation of thyroid nodules |
| 1455 | R226 | Serafimov V. Saliba K | CT guided biopsy of the C2 vertebral body – case report |
| 1505 | R114 | Vassallo P. Matei C, Koutcher J | BMS 180549-enhanced MR lymphography: utility for differentiating reactive from tumour bearing lymph nodes |
| 1520 | R003 | Schranz M. Malone D. Gibney R | The use of expandable metallic stents in the palliation of malignant dysphagia: an experience using fluoroscopic guidance |
| 1535 | R052 | Saliba K. Crockford M. | Guide wire breast localization in Malta – quo vadis? |
| 1545 | R007 | Micallef M. Cassar Torreggiani W. Hurley M, Hogan B | Ultrasound management of scrotal swelling |
| 1555 | R002 | Zammit A | Magnetic resonance imaging – state of the art |
| 1610 | R048 | Calleja M. Crockford M | The impact of MRI in Malta – an audit |
| 1620 | R131 | Cassar Torreggiani W. Varghese J, Haslam P, Lee M | The value of contrast-enhanced 3D MRA in the pre-operative evaluation of aorto-iliac disease |

Boffa Hall: Session 10**Friday, 12th March 1999****PATHOLOGY II****PAT II 01-04****Chairmen: Dr J Deguara, Dr A Portelli**

| | | | |
|------|------|--|---|
| 1630 | R031 | Borg MA. Abela N, Pace P | Evolution of methicillin resistant staphylococcus aureus (MRS) infection in Malta |
| 1645 | R043 | Barbara C. Portelli A | Laboratory testing for human immunodeficiency virus (HIV) in the Maltese islands |
| 1700 | R044 | Portelli A, Barbara C | Mycoplasma pneumoniae infections in the Maltese islands |
| 1715 | R085 | Piscopo T, Mallia Azzopardo C, Grech V | Meningococcal disease in Malta: 1994-1998 |

Boffa Hall: Session 11**Friday, 12th March 1999****POSTER DISCUSSION
FORUM****PHA P01-11**1730 – 1830 **PHARMACY**
1830 – 1930 **GENERAL****Chairmen: Professor A Serracino Inglott, Mr M Zarb Adami**
Chairmen: To be announced

Republic Hall: Session 12**Saturday, 13th March 1999****PAEDIATRICS I****PED I 01-07****Chairmen: Dr D Azzopardi, Dr P Vassallo Agius**

| | | | |
|------|------|--|---|
| 0830 | R269 | Dillon M | Corinthia Paediatric Research Fund Lecture: Childhood vasculitides |
| 0900 | R079 | Grech V, Degiovanni JV | Non-surgical closure of atrial septal defects – initial experience in Malta |
| 0915 | R070 | Buttigieg S | A study on childhood obesity and associated factors |
| 0925 | R116 | Vassallo J, Nieschlag E | Short courses of testosterone enanthate for the treatment of constitutionally delayed puberty: a retrospective analysis |
| 0940 | R060 | Fearne C | Scrotal approach for inguinal hernia repair in boys |
| 0955 | R055 | Gatt D, Zerafa M, Drago S, Fearne C | Post operative epidural analgesia on a paediatric general surgical ward |
| 1010 | R061 | Attard Montalto S, Hadley J, Eden O, Saha V | Ongoing assessment of nutritional status in children with cancer |

*Coffee Break***Republic Hall: Session 13****Saturday, 13th March 1999****PAEDIATRICS II****PED II 01-07****Chairmen: Professor M Dillon, Dr S Attard Montalto**

| | | | |
|------|------|---|---|
| 1100 | R144 | Azzopardi D, Edwards AD | Mild hypothermia following birth asphyxia – preliminary observations |
| 1130 | R069 | Soler D | Seizure characteristics in children with mental retardation |
| 1145 | R204 | Josifova D, Bezzina Wettinger S, Congiu R, Caffai A, Rosatelli C, Cao A, Felice AE | Genetic testing of cystic fibrosis in Malta |
| 1200 | R155 | Soler P, Abela C | The impact of in-line bacterial filters on central line related sepsis in sick neonates |
| 1215 | R111 | Xuereb S, Attard Montalto S; Agius Muscat H | Quality of life of survivors following treatment in the early neonatal period |
| 1230 | R273 | Spiteri B | Attention deficit disorders |
| 1245 | R080 | Grech V | Trends in presentation of congenital heart disease in Malta |

**2030 CONFERENCE DINNER
Westin Dragonara Resort**

Boffa Hall: Session 12**Saturday, 13th March 1999****MEDICINE III****MED III 01-10****Chairmen: Professor C Black, Dr C Mallia****Rheumatology**

| | | | |
|------|------|---------------------------------------|---|
| 0830 | R270 | Black C | Musculoskeletal diseases: diagnosis and management |
| 0900 | R223 | Mallia C | Systemic Lupus Erythematosus in Malta |
| 0920 | R231 | Cassar PJ | Thalidomide revisited |
| 0930 | R147 | Camilleri F, Mallia C | Dermatomyositis in Malta |
| 0940 | R130 | Cassar PJ, Coleiro B, Mallia C | Toxicity profile of methotrexate in rheumatoid arthritis: a preliminar survey |

Nephrology

| | | | |
|------|------|---|---|
| 0950 | R071 | Farrugia E | Outcome of treated end stage renal disease patients in Malta |
| 1000 | R066 | Galea I, Bugeja A, Farrugia E | Dialysis adequacy in Maltese end-stage renal failure patients |
| 1010 | R075 | Farrugia E | Renal disease in Malta: a renal biopsy update |
| 1020 | R172 | Schembri M, Farrugia E, Buhagiar L, Attard A | Renal transplantation – a wholly Maltese experience |
| 1030 | R133 | Cassar Torreggiani W, Hurley M, Micallef M, O'Laoide R | Xanthogranulomatous pyelonephritis: a review of 33 patients |

*Coffee Break***Boffa Hall: Session 13 Saturday, 13th March 1999****SURGERY III****SUR III 01-07****Chairmen: Professor A Maran, Mr C Apap Bologna**

| | | | |
|-----------------------|------|--|--|
| 1100 | R271 | Maran A | The nature of evidence |
| Otolaryngology | | | |
| 1130 | R047 | Pace Balzan E, Davies RA, Luxon LM | Factors affecting vestibular compensation |
| 1140 | R255 | Agius AM | Endoscopic sinus surgery: early results in Malta |
| Orthopaedics | | | |
| 1150 | R063 | Bernard A | Leg lengthening |
| 1210 | R235 | Andrejevic P, Casha J, Camilleri MT | Scoliosis in Malta |
| 1220 | R237 | Abela M, Casha J | Spinal injuries in Malta |
| 1230 | R238 | Zrinzo A, Casha J | Pedicle screw fixation in Malta – the early days |

**2030 CONFERENCE DINNER
Westin Dragonara Resort**

POSTERS

BIOMEDICAL SCIENCES

BMS P01-11

| | | | |
|----------------|------|---|---|
| BMS P01 | R121 | Micallef MJ , Ellul Micallef R. Kurimoto M | Interleukin 18 exhibits anti-tumour activity in a mouse model of malignant ascites. Studies on the immunological mechanism involved in tumour rejection |
| BMS P02 | R093 | Cuschieri A , Millicevic Z. Millicevic NM | Stereological study of tissue compartments of the human spleen |
| BMS P03 | R214 | Debono B | The molecular evolution of superoxide dismutase |
| BMS P04 | R | Hunter T , Hunter GJ | Active site-anatomy in iron and manganese superoxide dismutases |
| BMS P05 | R181 | Sant R , Holzgreve W | A combination of FISH and Hb F immuno-fluorescence staining for the non-invasive prenatal diagnosis of fetal aneuploidies |
| BMS P06 | R180 | Sant R , Holzgreve W | Hb F immuno-fluorescence staining as a specific fetal cell marker for fetal cell isolation from maternal blood |
| BMS P07 | R206 | Marwan M , Felice AE | Haemoglobinopathies in Libya |
| BMS P08 | R209 | Valentino M , Rosner G. Sakaki T. Nozaki H. Graf R. Muscat R | Transient alterations of nitric oxide. cerebral blood flow and spreading cortical depression: relationship to damage in the Ischemic Penumbra |
| BMS P09 | R212 | Mallia A , Muscat R | A comparative study of the analysis of water and fat-soluble vitamins and antibiotics in veterinary products by HPLC and CE |
| BMS P10 | R250 | Vassallo N | Cancer genetics – mutations testing and basic research |
| BMS P11 | R211 | Sammut G , Muscat R | The REMEDI – A diagnostic tool for illicit drug identification |

ONCOLOGY

ONC P01-02

| | | | |
|----------------|------|--|--|
| ONC P01 | R137 | Kostrica R , Smilek P. Hlozek J | Squamous cell carcinoma of Waldeyr's circuit treated in years 1991-1994 at ENT clinic in BRNO: a retrospective study |
| ONC P02 | R158 | Calvagna V , Dalmas M | The incidence of childhood cancers in Malta |
| ONC P03 | R083 | Dalmas M , Caruana-Dingli G | Tumour staging and histology of female breast cancer in Maltese |

PATHOLOGY

PAT P01-03

| | | | |
|----------------|------|---|---|
| PAT P01 | R013 | Vella Zahra L , Barbara C. Cuschieri P. Cacciottolo JM | Trends in the isolation of yeast species from clinical specimens |
| PAT P02 | R014 | Vella Zahra L , Barbara C, Zahra A | A survey on fungal infections in Malta |
| PAT P03 | R086 | Debattista N , Borg MA. Cuschieri P | Participation in the PALM international survey on antimicrobial sensitivity |

MEDICINE**MED P01-28**

| | | | |
|----------------|------|--|---|
| MED P01 | R033 | Borg MA , Abela N, Pace P | Review of needlestick injuries in St Luke's Hospital, Malta |
| MED P02 | R167 | Vella K A | Brucellosis in Malta – an improved strategy for control |
| MED P03 | R096 | Xuereb M , Cuschieri A, Galea Debono A | Predictive gene testing for Huntington's disease in Malta |
| MED P04 | R151 | Mifsud J , Mizzi M, Galea Debono A | An assessment of population kinetic software for antiepileptic drugs in a clinical outpatient setting |
| MED P05 | R152 | Galea D , Mifsud J, Millership J | Pharmacology of drug enantiomers indicated in absence seizures |
| MED P06 | R153 | Buttigieg A | The therapeutic management of epilepsy with the newer antiepileptic drugs |
| MED P07 | R109 | Cachia MJ | Diabetic ketoacidosis in Type II Diabetes Mellitus |
| MED P08 | R028 | Fava S , Azzopardi J, Watkins P, Hattersley A | Adult height and proteinuria in Type 2 diabetes |
| MED P09 | R029 | Zammit M , Fava S, Azzopardi J | Non-genetic determinants of the age of diagnosis of insulin dependent diabetes mellitus |
| MED P10 | R022 | Vella A , Sham P, Rizza R, Basu A, Basu R | Glucagon-like peptide-1 and its therapeutic potential in type 2 diabetes mellitus |
| MED P11 | R020 | Vella A , Khosla S | A 35 year old male with bone pain and muscle weakness |
| MED P12 | R021 | Vella A , Farrugia G | Recurrent confusion in a patient with short-bowel |
| MED P13 | R110 | Cachia M J , Azzopardi J | The mimicry of hypopituitarism |
| MED P14 | R117 | Vassallo J , Schlegel P, Crowley W, Sluss P | GnRH-induced changes in bio- and immunoactive FSH concentrations in male idiopathic infertility |
| MED P16 | R160 | Balzan M V | Five year re-admission pattern for adults previously admitted for asthma. Is there any gender difference? |
| MED P17 | R148 | Camilleri F , Mallia C | RNP positivity in Maltese SLE patients |
| MED P18 | R149 | Camilleri F , Mallia C | Male SLE patients in Malta |
| MED P19 | R067 | Galea I , Farrugia E | Renal bone disease in Maltese renal transplant patients |
| MED P20 | R072 | Farrugia E | Membranous nephropathy in Malta – a clinicopathologic study |
| MED P21 | R073 | Farrugia E | Cytomegalovirus infection in renal transplant recipients |
| MED P22 | R076 | Farrugia E | Familial Mediterranean Fever (FMF): from inflammation to amyloidosis |
| MED P24 | R135 | Cassar Torreggiani W , Logan M, Micallef M | Chest radiographic and CT correlation of metastatic lung parenchymal calcification in patients with renal failure |
| MED P25 | R077 | Farrugia E | Ethical issues in dialysis |
| MED P26 | R169 | Xuereb R G , Xuereb M, Borg C, Fenech A | Exercise stress testing does not induce myocardial injury. A study based on serum markers. |
| MED P27 | R170 | Xuereb R G , Xuereb M, Fenech A | Is early ambulation four hours after coronary angiography with 7F-catheters safe? |
| MED P28 | R101 | Galea J , Manche A | Soluble adhesion molecule expression in patients undergoing coronary artery bypass graft surgery. |

**OBSTETRICS &
GYNAECOLOGY****OBG P01-12**

| | | | |
|----------------|------|--|---|
| OBG P01 | R197 | Mamo J , Attard MF, Armatys A | Psychological aspects of maternity care |
| OBG P02 | R196 | Muscat P , Mamo J | Attitudes of women towards gynaecological cancer screening in a small island population |
| OBG P03 | R193 | Brincat MP , Galea R, Muscat Baron Y, Xuereb A | Changes in bone collagen markers in untreated and oestrogen treated postmenopausal women |
| OBG P04 | R145 | Suzin J , Surkont G, Bienkiewicz A | Assessment of uterine cavity of myomatous uterus by transvaginal sonography and histerosonography |
| OBG P05 | R189 | Muscat Baron Y , Brincat M, Galea R | Carotid artery wall correlates with skin thickness in postmenopausal women |
| OBG P06 | R185 | Muscat Baron Y , Galea R, Brincat M | Iliac vessel wall thickness in treated and untreated postmenopausal women compared to menstrual women |
| OBG P07 | R187 | Muscat Baron Y , Brincat M, Galea R, Muscat Baron A | Reducing the incidence of brachial plexus injuries in obstetrics |
| OBG P08 | R184 | Muscat Baron Y , Galea R, Brincat M | Changes of the metabolic profile in postmenopausal women treated with transdermal oestrogen |
| OBG P09 | R186 | Brincat MP , Galea R, Muscat Baron Y | A screening model for postmenopausal osteoporotic fractures |
| OBG P10 | R199 | Armatys A , Mamo J, Muscat P | Gynaecological cancer screening in a small island |
| OBG P11 | R146 | Bienkiewicz A , Suzin J | The influence of sex steroids and some arachidonic acid metabolites and inhibitors of their synthesis on collagen content in cervix and uterus during pregnancy |
| OBG P12 | R222 | Montanaro Gauci M | Predicting outcome in IUI |

PSYCHIATRY**PSY P01-06**

| | | | |
|----------------|------|--|--|
| PSY P01 | R243 | Saliba JR , Scicluna I | The use of methylphenidate in Malta |
| PSY P02 | R219 | Cassar D , Cassar V, Bonello D | Network therapy: developing a community user support system |
| PSY P03 | R220 | Cassar D , Grech S | Quality of life of chronic mentally ill people with a history of previous institutionalisation |
| PSY P04 | R104 | Grech A , Takei N, Murray RM | Influence of cannabis on the outcome of psychosis |
| PSY P05 | R165 | Shaw C , Sant Fournier MA, Saliba JR, Vella P | A drug utilisation review at a psychiatric hospital |
| PSY P06 | R068 | Cassar JR | Mental health issues in general practice settings |

**DERMATO-
VENEREOLOGY****DEV P01**

| | | | |
|----------------|------|--------------------------|---------------------------------|
| DEV P01 | R123 | Muscat P , Mamo J | Cutaneous Leishmaniasis in Gozo |
|----------------|------|--------------------------|---------------------------------|

**HEALTH CARE
PRIORITIES****HCP P01-04**

| | | | |
|----------------|------|---|---|
| HCP P01 | R128 | Grech K E , Darch R | Developing new models of care in the new hospital, Tal-Qroqq: a whole system approach |
| HCP P02 | R082 | Grech V , Agius-Muscat H, Elliott M | The development of a telemedicine link with a tertiary paediatric cardiothoracic centre |
| HCP P03 | R174 | Vella P , Mallia C, Mackie CA, Everard M | Development of a model to support the practice for the introduction of new drugs into the Government Health Services in Malta |
| HCP P04 | R215 | Debono B | Mind the gap: bringing information technology (IT) to the medical student |

RADIOLOGY**RAD P01-08**

| | | | |
|----------------|------|--|--|
| RAD P01 | R004 | Schranz M. Blake M | A web-based tutor in radiology: an innovative user-streamed teaching aid |
| RAD P02 | R005 | Schranz M. Blake M, Malone D, Gibeny R | A web-based interactive tutor in gastro-intestinal radiology using dynamic HTML |
| RAD P03 | R008 | Micallef M. Ramesh N, Twair A, O'Laoide R | Significance of calcification (testicular/extra-testicular) detected by ultrasonography |
| RAD P04 | R134 | Cassar Torreggiani W. Micallef M, Brenner C, Guiney M | CT appearances of caecal volvulus |
| RAD P05 | R225 | Serafimov V. Calleja M, Felice H | Drainage of mediastinal abscess under CT guidance – case report |
| RAD P06 | R140 | Calleja R. Irving S, Burgess N | An IVU is the investigation of choice in renal colic in pregnancy |
| RAD P07 | R143 | Calleja R. Carroll N, Bull R, Doyle P | Radiological evaluation of the upper tract changes in ileal conduits |
| RAD P08 | R227 | Serafimov V, Gatt A, Calleja M, Saliba K | Prevention of pulmonary embolism in the patient with free floating thrombus using temporary and permanent inferior vena cava filters |

SURGERY**SUR P01-09**

| | | | |
|----------------|------|---|---|
| SUR P01 | R088 | Agius A M, Vassallo P | An unusual cause of halitosis |
| SUR P02 | R091 | Andrejevic P. Kunovski G, LaFerla G, Formosa N | Percutaneous CBD (common bile duct) stone removal via T-tube |
| SUR P03 | R090 | Andrejevic P. Felice G | Inverted papilloma of the urinary bladder |
| SUR P04 | R239 | Casha J N | Olecranon fractures and osteogenesis imperfecta in children |
| SUR P05 | R241 | Casha J N, Jain AS, Stewart CPU | Bilateral amputations in Tayside |
| SUR P06 | R236 | Casha J N, Ford M | Recurrent gas-containing disc herniations |
| SUR P07 | R105 | Bernard A. Molnar I | Our experience with hemicallotaxis |
| SUR P08 | R087 | Agius A | Ramsay Hunt syndrome and cranial polyneuropathy |
| SUR P09 | R162 | Briffa J E, Darmanin F X, Chircop V | The Burns Unit St Luke's Hospital – ten years on and going strong |

PHARMACY**PHA P01-12**

| | | | |
|----------------|------|---|---|
| PHA P01 | R036 | Azzopardi L , Serracino Inglott, Zarb Adami M, Galea A | Ergonomics of a Health-Care Practice |
| PHA P02 | R037 | Zarb Adami M | Cost of Medicines |
| PHA P03 | R038 | Serracino Inglott A , Azzopardi L, Zarb Adami M, Seguna Y | Producing and evaluating health promotion material for use in a community setting |
| PHA P04 | R039 | Serracino Inglott A , Azzopardi L, Zarb Adami M, Caruana D, Caruana S, Mifsud A | Development of speciality formularies |
| PHA P05 | R041 | Azzopardi L , Serracino Inglott A, Zarb Adami M | Performance-based assessment instruments |
| PHA P06 | R042 | Serracino Inglott A , Azzopardi L, Zarb Adami M | The influence of the medieval milieu on modern and contemporary use of medicines |
| PHA P07 | R253 | Farrugia CA , Groves MJ | The formulation of gelatin nanoparticles and their effect on melanoma growth in vivo |
| PHA P08 | R254 | Sacco J | Clinical considerations of atmospheric level concentrations in the Maltese environment |
| PHA P09 | R195 | Cali-Corleo R , Gutierrez G, Saliba C, Serrar M, Marroni A, Brincat M, Cormary M | HSP release is dependent on the level of cellular pre-conditioning and not on the type or severity of the triggering stress |
| PHA P10 | R034 | Attard E , Scicluna-Spiteri A, Brincat M, Cuschieri A | The effects of cucurbitacin E on the proliferation of prostate and breast cancer cell lines, and peripheral T-lymphocytes |
| PHA P11 | R232 | Cordina M , McElnay JC | Screening for allergen sensitivity in asthma patients |
| PHA P12 | R040 | Zarb Adami M , Serracino Inglott A, Azzopardi L, Portughese A | Management of acne in a community setting |

PAEDIATRICS**PED P01-11**

| | | | |
|----------------|------|---|--|
| PED P01 | R201 | Boudennaia T , Josifova D, Y, Felice A | Distribution of total and lipoprotein cholesterol and triglyceride levels in Maltese children |
| PED P02 | R176 | Muscat Baron A , Muscat Baron Y, Ellul C, Bonavia M; Borg C, Attard Montalto S | Review of developmental surveillance at well baby clinics |
| PED P03 | R156 | Soler P , Soler G, Parascandalo R | Exogenous surfactant treatment in Malta and improved survival in newborn babies with respiratory distress syndrome |
| PED P04 | R081 | Grech V , Vassallo Agius P, Savona-Ventura C | Declining male births in Malta |
| PED P05 | R188 | Muscat Baron A , Muscat Baron Y, Spencer N, Attard Montalto S | Children's residential homes in the Maltese islands |
| PED P06 | R024 | Sciberras C | Socio-cultural implications of cerebral palsy in Malta |
| PED P07 | R025 | Sciberras C | Cerebral palsy – the situation in Malta as compared to other countries |
| PED P08 | R059 | Fearne C , Farrugia M | Necrotizing enterocolitis in an eight-week old with cystic fibrosis |
| PED P09 | R058 | Calleja M , Vassallo P, Fearne C | Balloon dilatation in oesophageal strictures in children – case report |
| PED P10 | R054 | Fearne C , Drago S, Gravel J | Eating habits of children in hospital |
| PED P11 | R056 | Farrugia M , Fearne C | Clinical features of intussusception |

**ORAL
PRESENTATIONS**

BMS I (R273)

GENOMICS AFTER 2000

A. Cao (*Abstract not available at time of going to press*)

BMS I (R274)

DNA AT THE BEDSIDE: FROM THALASSAEMIA TO DIAGNOSTIC MOLECULAR GENETICS

AE Felice (*Abstract not available at time of going to press*)

BMS I (R275)

THE BIOLOGY OF OVARIAN CANCER

A. Wilson (*Abstract not available at time of going to press*)

BMS I (R276)

THE SCIENTIFIC BASIS OF HEDONISM

R. Muscat (*Abstract not available at time of going to press*)

BMS I (R257)

OXIDATIVE STRESS, CHAPERONES AND SUPEROXIDE DISMUTASE

GJ Hunter, Therese Hunter. *Department of Physiology and Biochemistry, University of Malta, Msida MSD 06, Malta.*

During oxidative stress or heat shock, the synthesis of molecular chaperones is induced.

These macromolecular complexes help to prevent misfolding and aggregation of essential proteins. The iron and manganese superoxide dismutases (FeSOD and MnSOD respectively) of *Escherichia coli* protect cells against oxidative stress and are thus essential enzymes in such environments. We have investigated whether chaperonin complexes exhibit a protective and/or a preferential effect on FeSOD or MnSOD in *E. coli*. The co-chaperonins GroES and GroEL (collectively GroESL) were simultaneously expressed in SOD-deficient mutants of *E. coli*, together with either FeSOD or MnSOD. The SOD enzymes were then affinity-purified via a novel Histidine-tagged intermediate utilising an expression plasmid developed in our laboratory. Biochemical analyses indicate an increase of almost two-fold in the specific activity of MnSOD when co-expressed with GroESL. No effect was observed with FeSOD. Both SODs, however, exhibited an increase in solubility and therefore overall yield in the presence of GroESL. Human MnSOD when co-expressed with GroESL in *E. coli* was also found to exhibit a comparable increase in specific activity. Under conditions of chemically induced oxidative stress, SOD-deficient cells do not grow. As anticipated, stressed cells overexpressing SOD exhibited growth comparable to that of wild-type *E. coli*. Surprisingly, however, we found that the expression of GroESL alone could rescue cells from the effects of oxidative stress. In eukaryotes, MnSOD is targeted to the mitochondrion and must enter the matrix in an unfolded state. Refolding into an active enzyme must occur either spontaneously or with the assistance of chaperones. Since GroESL is homologous to the eukaryotic mitochondrial chaperone Hsp-60/Hsp-10, these studies may help to explain the evolutionary selection for MnSOD by eukaryotic organelles.

BMS II 01 (R210)

RECOMBINANT HUMAN IFN- α A MODULATES DOPAMINE RELEASE IN THE NUCLEUS ACCUMBENS

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Although initially seen as two separate systems, evidence is accumulating that the central nervous system (CNS) and Immune system are able to communicate in a bidirectional manner to influence each other's functioning. Sickness behaviour involves physiological changes that allow the organism to modify its way of life in an effort to combat the infection. On the other hand the CNS holds a central position in the control of the systems involved in immune reactions and is able to modify behaviour to allow the immune system to function to its fullest capability. The role that cytokines play in modulating the immune response is now being extended further to include a peripheral and central neuromodulating effect.

One of the cytokines that has been most clinically used is Interferon alpha (IFN- α). In terms of psychological side effects subjects using IFN in cancer therapy report memory impairment, apathy, cognitive slowing, decreased motivation, motor dysfunction, sexual dysfunction, anxiety and depression (Valentine et al., 1998). Experiments utilising other cytokines have reported anhedonia as well as changes in transmission in aminergic pathways associated with centres involved in the reward pathway namely the nucleus accumbens (Nacb) and the ventral tegmentum (VTA) - **LPS** (Borowski et al., 1997) (Yirmiya, 1996), **IL-2** (Hebb et al., 1998; Anisman, Merali, 1998; Anisman et al., 1998; Anisman et al., 1991).

Dopamine (DA) plays a very important role in reward. A decrease in DA but not NA and 5HT levels as well as a lowering in neural activity following long-term IFN- α administration have been reported (Shuto et al., 1997). In our laboratory voltammetry on in vitro rat brain slices, when perfused with recombinant Human Interferon- α A (rHIFN α A) showed a decrease in DA release across the different frequencies of stimulation applied. These results would also seem to support behavioural studies in which IFN induced anhedonia in a manner similar to that of dopamine antagonists.

BMS II 02 (F213)

CHARACTERIZATION OF A COPPER DETECTING CHEMICAL MODIFIED GLASSY CARBON ELECTRODE

Hans-Helmut Frey, *Department of Biomedical Sciences, University of Malta, Msida, Malta*

The circulation of heavy metals through soil, water and air has greatly increased. Their impact on the environment and transfer to the human food chain remains an important issue which entails some unknown risks for future generations. In connection with this, it is necessary to create universally reliable, quick and exact methods to determine these toxic elements. One of the most sensitive technique for heavy metal detection is stripping voltammetry (ASV), an electrochemical method. Unfortunately ASV mainly involves mercury or mercury coated electrodes, a very toxic heavy metal. To avoid mercury, a glassy carbon electrode (GCE) was coated with tetraphenylporphyrin (TPP) and used for ASV of heavy metals. It showed an increase in sensitivity for the detection of copper compared to an uncoated electrode. The influence of TPP layer thickness, pH and accumulation time on the copper detection and the interference with other cations were investigated. The detection limit of copper in a short accumulation time of 30 s was 12 ppb. Using longer accumulation times, the detection limit can be reduced to lower concentrations of the metal. This project was supported by the European Union Avicenne

Program Grant to Prof. J.V. Bannister (Department of Biomedical Sciences, University of Malta, Msida MSD 06, Malta) (Contract number: AVI*-CT 93-0002).

BMS II 03 (R203)

C/EBP ϵ AND GABP UP-REGULATE THE ACTIVITY OF THE DEFENSIN GENE PROMOTER, AS DOES THE PROCESS OF MYELOID MATURATION INTO GRANULOCYTES

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Defensin, an azurophil granule protein is synthesised and sorted to the granule compartment during the late myeloblast, promyelocyte and early myelocyte stages of myeloid cell differentiation. For this reason the *defensin* gene has been identified as one over-expressed in leukaemias blocked at these stages of maturation. Abnormalities in different transcription factors are often associated with leukaemia. Studying the transcription factors which regulate defensin expression may therefore give some insights into possible mechanisms of maturation arrest. The promyelocytic leukaemia cell line NB4, which may be differentiated to a granulocyte like cell using all-trans retinoic acid (ATRA) was used here to study the *defensin* promoter. Sequences immediately upstream of the *defensin* gene coding sequence were cloned into a human growth hormone reporter vector constructed to show negligible plasmid sequence-dependent up-regulation. Reporter gene activity following transfections with constructs containing different lengths of *defensin* upstream sequence helped identify a minimal promoter. Such transfections were carried out with undifferentiated (low defensin expression) and ATRA-induced (high defensin expression) NB4 cells and the relative up-regulation of the activity of different deletion-mutant constructs with differentiation was noted.

Concomitant in vitro footprinting studies of the defensin upstream sequence identified different sites to which proteins are bound. Computer-assisted analysis identified potential transcription factor binding sites and Electrophoretic mobility shift assays (EMSA) showed that C/EBP ϵ and ets factors GABP α and PU.1 bind to some of these sites. Mutation of these factor-binding sites within the promoter-driven reporter constructs and co-transfections of expression constructs for these factors together with the reporter constructs into non-myeloid HeLA cells as well as into NB4 cells were performed. Such experiments show that C/EBP ϵ and GABP α strongly upregulate the defensin promoter and their associated binding sites are essential for defensin promoter activity. The PU.1-binding site on the other hand is not so essential for high level activity.

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BMS II 04 (R094)

THE MALTA CONGENITAL ANOMALIES REGISTER - ANALYSIS OF DATA 1993-1997

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Introduction and objectives: The Congenital Anomalies Register started in 1984 as a research project at the University of Malta and, in collaboration with the Department of Health

Information, became a computerised Malta Register in 1997. The register has been a member of EUROCAT (European Registration of Congenital Anomalies) since 1986. This paper reviews the data on congenital anomalies for the five year period 1993-1997.

Definitions, methods and materials: For purposes of the register congenital anomalies are defined as "structural defects, including congenital malformations, deformations and disruptions, as well as congenital genetic metabolic and hereditary diseases". The registry employs active data collection from several sources including the maternity wards/nursery, SCBU, doctors' notifications, Maternity Information System, National Mortality Register, Genetics Clinic, Cardiac Lab and others. The data is processed at the Department of Health Information following EUROCAT guidelines. Infants are included in the register if diagnosed within one year after birth. Certain minor anomalies as detailed by EUROCAT are excluded from the register unless occurring together with a major anomaly. Infants with more than one defect are classified as having a recognised syndrome, sequence or chromosomal anomaly or as multiply malformed if they have two or more randomly associated major anomalies.

Results and conclusions: During the 1993-1997 there were 864 infants with one or more major congenital anomalies out of 24,510 total births on the Maltese Islands. 66% of anomalies occur as isolated defects. The most commonly occurring anomalies are cardiovascular, limb, genitourinary and chromosome defects. The total prevalence rates in Malta are similar to those of other EUROCAT registries. However, the livebirth prevalence rates of a number of conditions, such as Down syndrome, are higher in Malta, mainly because of the absence of pregnancy termination. This situation presents a greater challenge for the prevention of birth defects and for the Maltese society to cater for these individuals.

BMS II 05 (R179)

ISOLATION OF FETAL CELLS FROM MATERNAL CIRCULATION

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It has long been known that fetal cells migrate to the maternal circulation during pregnancy. Isolating these cells will produce authentic fetal DNA that can be used for prenatal diagnosis. Thus risk-free, non-invasive prenatal diagnosis will be possible for any known genetic disorder. Fetal nucleated red blood cells are probably the cells most suited for this purpose. But these cells are few and various enrichment steps followed by identification procedures are needed.

Twenty ml venous blood is collected from the chosen, fully counselled and consenting pregnant women attending the Antenatal Clinic. The blood is taken through a fetal cell enrichment protocol comprising density centrifugation and magnetic cell sorting for the CD 71 transferrin cell surface receptor. The isolated cells are immuno-fluorescently stained for Haemoglobin F (Hb F) or hybridised for the sex chromosomes. Thus the fetal origin of the cells is confirmed.

Research so far shows that although fetal cells are present in most maternal blood samples, they may be too scarce to isolate them in all cases. In the work included in this study, out of 15 maternal blood samples, fetal cells were isolated in 11 using Hb F immuno-fluorescence staining, 3 from 9 samples subjected to FISH for the X & Y chromosome only and 3 out of 5 samples subjected to a combination protocol of Hb F staining and FISH.

Although up till now, this technique is not successful in isolating fetal cells in all pregnancies, it offers the first concrete chance of the long sought goal of risk-free, early prenatal diagnosis. Using micro-manipulation and other techniques, these cells are made available for multi-colour

fluorescence in situ hybridisation (FISH) or multiplex single cell polymerase chain reaction (PCR) for the target genetic disorder. Thus worries can be allayed in at risk couples and thorough ante-natal counselling can help couples with affected fetuses.

BMS II 06 (R207)

A STUDY OF GENETIC AND NON-GENETIC FACTORS LEADING TO A VARIATION OF $G\gamma$ GAMMA GLOBIN GENE EXPRESSION IN NEWBORNS

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The ratio of the $G\gamma$ to $A\gamma$ chains of fetal haemoglobin is variable but approximates 70% : 30% in most newborn babies. This ratio changes during the first six months to 40% :60%, accompanying the fetal to adult haemoglobin switch, although some individuals retain their high $G\gamma$ values. Several genetic and non-genetic factors have been proposed to influence γ globin gene expression and the fetal to adult haemoglobin switch. These include genetic factors such as gender and factors linked to the β globin gene region such as the β cluster haplotype, and non-genetic factors which in newborns include gestational age, birth weight and maternal diabetes status.

Our investigation was performed on 190 newborns that are heterozygotes for the benign $G\gamma$ globin variant haemoglobin F Malta 1 that is found in 1.8% of Maltese newborns. This variant was used as a marker of allelic $G\gamma$ globin expression which was quantified using anion exchange chromatography followed by reverse phase HPLC or directly by reverse phase HPLC using the Bio-Rad Variant Globin Chains program. Three individuals homozygous for the $G\gamma$ globin variant haemoglobin F Malta 1 were also included in this study. The relative importance of gestational age, birth weight, maternal diabetes status, gender and two polymorphisms in the $G\gamma$ globin gene promoter region, in determining the expression of the $G\gamma$ globin gene was studied. The contribution of the β cluster haplotype and other polymorphisms in the $G\gamma$ globin gene promoter region in determining the level of expression of the $G\gamma$ globin gene is currently being investigated.

BMS II 07 (R122)

INTERLEUKIN 18 ENHANCES T HELPER TYPE 1 CYTOKINE PRODUCTION BY ENRICHED HUMAN T CELLS: SYNERGISM WITH INTERLEUKIN 12 FOR INTERFERON GAMMA PRODUCTION *IN VITRO*

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Immune responses governed by T cells can be grouped into two categories, those related to the generation of cell-mediated immunity and those related to the humoral immunity. In anti-tumour therapy, it is generally considered desirable to induce cell-mediated immunity against tumour such that memory against tumour-associated antigens is induced and metastasis is prevented. In fact, it is now the trend that tumour cell vaccines be applied in anti-tumour therapy. However, one of the drawbacks to this approach is the absence of a good stimulator of the T helper type 1 (Th 1) response since the main candidate for this role, namely interleukin 12 (IL-12) was found to have serious side-effects in clinical trials. IL-18 is a recently discovered cytokine which was identified in the sera of mice suffering from endotoxin shock as an activity that induces the production of interferon gamma (IFN- γ). The aim of this study was to examine the effects of IL-18 on the *in vitro* cytokine production

by stimulated human T cells after enrichment. T cells were enriched by passage through immunocolumns and stimulated with anti-CD3 monoclonal antibody (100 ng/ml) in culture in the presence of increasing concentrations of IL-18. The cytokine dose-dependently increased the production of the Th 1 cytokines granulocyte/macrophage colony-stimulating factor and IFN- γ by the cells. IL-18 also increased the proliferation of the cells but this was IL-2 dependent because it could be inhibited by a neutralising antibody to IL-2. Finally, IL-18 could synergise with IL-12 to induce the production of large amounts of IFN- γ by the cultured cells. Thus IL-18 appears to be a cytokine which is important alone or in combination with other cytokines in the induction of a Th 1 response and cell-mediated immunity.

BMS II 08 (R218)

BONE METABOLISM AND BONE MINERAL DENSITY IN PATIENTS WITH THALASSAEMIA INTERMEDIA.

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Data collected prospectively on the 28 thalassaemia homozygotes out of the known 29 subjects showed that osteopenia as documented by a low bone mineral density using DEXA, was present in the majority of the homozygote subjects and was apparent as early as 5 years of age, despite a seemingly adequate hypertransfusion regime. In an attempt to elucidate possible causes for the observed osteopenia, the level of bone biochemical markers for bone formation (serum procollagen I carboxyterminal propeptide [PCICP] and osteocalcin [Ocn]) and for bone resorption (urinary deoxypyridinoline crosslinks [DPC] and serum tartrate resistant acid phosphatase [TRAP]) were measured for the thalassaemia patients. Total (intact and fragmented) osteocalcin levels were found to be lower in thalassaemia patients than in controls for all age groups studied. Values for PCICP were reduced in the lower age group only, whereas normal levels of urinary DPC were found in thalassaemia patients. This small sample study would appear to indicate that decreased bone formation and possibly mineralisation might be responsible for the observed osteopenia in thalassaemic patients.

BMS II 09 (R200)

HUMAN G_{MI}-GANGLIOSIDOSIS IDENTIFICATION OF TWO POINT MUTATIONS IN IVS 7 IN TWO MALTESE FAMILIES.

Ali Al-ashtar, Connie Al-shinawi, Stephanie Bezzina Wettinger, Renald Blundell, Christian Scerri, Godfrey Grech, Joseph Vella and Alex Felice. Molecular Genetic laboratory, Department of Pathology on Campus, Faculty of Medicine and Surgery, University of Malta, Msida, Malta

The lysosomal storage disorder G_{MI} gangliosidosis (Genetic β -galactosidase deficiency) is a genetic neurological disorder caused by a complete or partial deficiency of the enzyme acid β -galactosidase. It is usually classified as being of infantile, juvenile or adult form. Infantile G_{MI} gangliosidosis is relatively common in the Maltese population, with a heterozygous incidence of 3.3 % and 0.027 % homozygotes. The molecular lesion associated with this pathology, was studied in two unrelated Maltese families. Fragments containing all the exons and flanking

regions of the β -galactosidase gene, were amplified using polymerase chain reaction (PCR) and then sequenced. A variant was identified and denoted as Spl 7. This double point mutation, CA→GT, lies within the IVS 7 of β -galactosidase gene, at position 9 and 10 bp downstream of the 3' end of exon 7; the 3' end is at cDNA position 842. *Taq* I restriction enzyme digestion, confirmed this mutation. In addition *Bfa* I restriction enzyme digestion, also confirmed the presence of the two mutations in *cis*. This variant was confirmed to be non-polymorphic by *Taq* I digestion of 50 random samples. Other variants are present in the Maltese population, but they were not characterised in this study. Urinary oligosaccharides analysis was used to test Maltese families for the presence of high amount of oligosaccharides; the result was consistent with the molecular study.

BMS II 10 (R092)

AN INTERNATIONAL STUDY OF CONGENITAL ANORECTAL ATRESIAS

Alfred Cuschieri¹ and the EUROCAT working group

¹*Department of Anatomy, University of Malta, Msida, MSD06, Malta*

Objectives: The study analyses the epidemiological characteristics of different types of congenital anorectal atresia to identify whether they represent distinct entities.

Methods: 1,403 cases of anorectal atresia were analysed from a total of 4,553,360 births in 33 EUROCAT registries during the period 1980 to 1994 .

Results: The overall prevalence of anorectal atresia was 30.8 per 100,000 births consisting of 3.5, 25 and 2.3 per 100,000 births for high, intermediate and low anorectal atresia respectively. Fistula occurred in about one third of cases. There was great heterogeneity in prevalence and distribution of the three types of anorectal atresia among the different registries.

Sex distribution showed a great predominance of males in anorectal atresias without fistula (sex ratio 2.33) as compared to those with fistula (sex ratio 0.92). Associated anomalies occurred in 72% of cases of high, 61% of intermediate and 45% of low atresias and were more frequent in atresia without fistula than in atresia with fistula. The most commonly associated anomalies were the VATER association (7.1%), chromosome anomalies (6.3%), caudal regression syndrome (3.1%) and exstrophy of the cloaca sequence (3.1%). There were significantly higher frequencies of stillbirths and pregnancy terminations and significantly lower gestational lengths and birth weights among babies with anorectal atresias without fistula as compared to those with fistula. Birth weight and gestational length were within the normal range for anorectal atresia occurring as a single anomaly, but markedly reduced when associated with other anomalies. Maternal age distribution showed increased frequencies for mothers below 25 years and mothers above 35 as compared to those of 25 to 35 years.

Conclusions: These results indicate that high, intermediate and low anorectal atresia with and without fistula are epidemiologically distinct entities which may be associated with different embryological, aetiological and risk factors.

EUROCAT is the European Register of Congenital Anomalies

BMS II 11 (R202)

DIHYDROPTERIDINE REDUCTASE DEFICIENCY, A RARE VARIANT FORM OF PHENYLKETONURIA: A STUDY OF THREE FAMILIES CARRYING THIS DISORDER

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³*Department of Paediatrics, St. Luke's Hospital G'Mangia*

Phenylketonuria (PKU) is a rare disorder arising from an error in phenylalanine metabolism. Dihydropteridine reductase (DHPR) deficiency is a rare form of PKU. Generally only 2% of patients suffering from PKU are diagnosed as suffering from DHPR deficiency. The situation observed in the Maltese Islands is unusual in that all the patients so far identified as phenylketonuric were found to be suffering exclusively from dihydropteridine reductase deficiency. The 3 probands under study are all under 3 years of age and are not related. This would indicate a high heterozygote occurrence of this disorder in the Maltese population.

A mutation in exon 1 of the DHPR gene was previously identified in a Maltese individual [1]. This mutation, G23D, has been identified in other patients of Mediterranean origin. All 3 probands were tested by restriction enzyme analysis, using the enzyme *Hinf*I, for this mutation. Two of the probands have been found to carry the G23D mutation. A cohort of random samples is now being tested for the presence of this mutation. This will be used to ascertain the heterozygous occurrence of dihydropteridine reductase deficiency in the Maltese population. The third proband is currently being further studied by Single Stranded Conformation Polymorphism analysis followed by Sequencing, to identify the mutation present.

[1] Smooker PM et al. Identification and *in Vitro* expression of Mutations causing Dihydropteridine Reductase Deficiency; *Biochemistry* 32:6443-6449, 1993.

BMS II 12 (R208)

ALZHEIMER'S PATIENTS CAN STILL MAKE TEA: MEMORY DEFICITS AND DAILY ACTIVITIES

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Alzheimer's Dementia is a progressive neurodegenerative disease that leads to a global impairment of cognitive function. In light of such global deterioration of memory skills, it is perhaps surprising that many AD patients continue accurately to complete routine tasks of daily activities, even though these tasks make demands upon many of the components of memory that are found to be impaired.

A better understanding of the nature of memory for everyday activities in AD patients is a prerequisite for the development of strategies for optimizing functional independence.

This study was a preliminary investigation on memory for actions and compared different encoding paradigms (verbal, motoric and prospective) and their effect on recall. The aim of the research was to identify the effects of different encoding strategies on recall for goal-directed actions. In addition differences between recall of actions (subordinates) and the overall intention of an activity (superordinates) were explored.

Results revealed a significant main effect of type of encoding [$F(2,42) = 15.30, p < 0.0001$] and a significant within-subjects effect of type of element recalled (action or overall intention of activity), [$F(1, 42) = 8.74, p < 0.005$]. Recall in the enactment condition was found to be superior to the verbal condition ($t(28), p < 0.0001$) and the prospective condition ($t(28), p < 0.005$).

Moreover, recall of superordinates was significant within the verbal paradigm ($t(14), p < 0.005$) but not in the enactment and prospective memory paradigms.

In light of these results it can be concluded that memory for actions is superior to verbal memory and memory benefits if recall is structured. The development of strategies to enhance functional independence in AD patients should aim to focus in this direction.

FCO 01 (R015)

DEFENCE MEDICAL SERVICES TELEMEDICINE UNIT

David Vassallo

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| <p>DEFENCE MEDICAL SERVICES TELEMEDICINE UNIT ACTIVITY SUMMARY 1998</p> |
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| Referring Locations | Hosp Sqn Sipovo, Bosnia RNH Gibraltar MPA Medical Centre, Falkland Islands South Georgia TPMH RAF Akrotiri (Cyprus) BATSUB Medical Centre, Belize RN Ships (experimental) |
| Number of referrals | 170 approx (to end Nov 98) |
| Publications and News Items | <ol style="list-style-type: none"> 1. Soldier Magazine (20 Mar 98) (news) 2. The Lancet (4 Apr 98) (news) 3. BMUS Bulletin (May 98) 4. SutureSelf (Spring 98) 5. What Digital Camera (May 98) 6. British J Healthcare Computing & Information Management (May 98) 7. Hospital Doctor (Summer 98) (news) 8. Military Medicine (Aug 98) 9. Navy News (various) 10. Journal of RAMC (Oct 98) 11. Olympuser Magazine (Autumn 98) 12. The Times Interface Supplement (4 Nov 98) 13. The Times Interface Supplement (11 Nov 98) 14. The Times Digital Photography Supplement (20 Nov 98) 15. BMJ Letter (28 Nov 98) |

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| | <p>16. British Journal of Plastic Surgery (in press) 17. J Roy Navy Med Serv (in press) 18. AMS 1999 Prospectus (in press) 19. Journal of Telemedicine & Telecare (Proceedings of TeleMed 98) (in press) 20. The Lancet (pending acceptance)</p> |
| Broadcast (TV & Radio) | <p>1. BBC TV South Today (Jun 98) 2. BBC TV Tomorrow's World (Aug 98) 3. BBC Local radio (various)</p> |
| Awards | <p>British Computer Society, Medal for IT, and Special Award (only issued twice before in 40 years) 4 Nov 98</p> <p>Hospital Doctor Innovation Team of the Year Finalist</p> |
| Lectures | <p>Royal Military College of Science, Shrivenham Shiplake College, Henley – 5th & 6th Form DMSTC Keogh Barracks Wessex Surgeons Regional Meeting Southampton General Hospitals Trust Defence Evaluation & Research Agency Dept Trade & Industry Institute of Health Service Managers Regional Telemedicine conferences (on behalf of Dept of Health) RH Haslar Postgraduate Centre Clinical Meeting</p> |
| Presentations | <p>British Computer Society (Nov 98) TeleMed 98 (Royal Society of Medicine, Nov 98) Surgeon General's Symposium (Dec 98)</p> |
| Forthcoming Lectures & Presentations | <p>Healthcare Computing 99 (International meeting): request to give keynote address and to chair a session (Mar 99) (PB) Danish Military Medical Society (Spring 99) (DV) Trauma Care UK (Summer 99 meeting) (DV) Association of Surgeons (Summer 99 meeting)(DV)</p> |
| Unit visitors | <p>Armed Forces Minister (Dr J Reid) Shadow Armed Forces Minister St Thomas' Hospital Ely District General Hospital Joint Services Staff Course Moldavian Armed Forces Hammersmith Hospital Radiology Dept Mobil Oil Company National Sports Medicine Council</p> |

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| | Bournemouth Hospital Dermatology Dept Olympus UK Nera Ltd UK Agora Healthcare |
| Advice to overseas Military Medical Organisations | USA Czech Military Medical Services |
| Other (PB) | Dept of Health Telemedicine Reference Group member and Chairman of Technical & Clinical Sub group Royal College of Radiology IT Group member and author of College teleradiology standards Triservice Adviser in Telemedicine to SG |
| Other (DV) | Invited by Prof Wootton (Prof of Telemedicine, Queen's University, Belfast) to help set up first significant telemedicine network for Third World based on DMS System Setting up MultiMed satellite teaching link between Bristol Medical Simulation Centre and Royal Hospital Haslar. |
| Other | Advice on telemedicine based on DMS System provided to doctors and hospitals world-wide including Palestine, Vietnam, Australia, USA, Sweden, Portugal, Germany, and Japan. |
| Web Sites | 1. RH Haslar Radiology Dept Telemedicine Website http://ourworld.compuserve.com/homepages/xray_haslar/telemed.htm 2. RH Haslar Library Military Medical Units Website http://www.rowe.dircon.co/medical/uk.htm |
| Future aims | 1. To consolidate existing telemedicine links. 2. To expand operational telemedicine links for British Forces world-wide, inc to RN Ships |

Staff: Surg Cdr P J Buxton RN (PB)
Lt Col D J Vassallo RAMC (DV)
Wg Cdr J H Kilbey RAF

Report prepared 5 Dec 98

FCO 02 (R246)**SCABIES RESISTANT TO TOPICAL TREATMENT - CURE WITH ORAL THERAPY**

Joseph L. Pace. *Dermatology Clinic, St. Philip's Hospital, St. Venera, Malta*

A 59 year old male patient developed scabies. He had been treated with currently available medication and when itching persisted, this was attributed to post scabies eczema. The patient got worse and his wife started itching. Steroids were prescribed ... In the absence of improvement with topical therapy and the iatrogenic immunosuppression, ivermectin was used successfully, perhaps for the first time ever in a Maltese patient.

Ref: The treatment of scabies with ivermectin. *J Am Acad Dermatol*, 1996; 34:140. Meinking TL, Taplin D, Hermida JL, et al. *N Engl J Med*, 1995; 333:26-30.

FCO 03 (R065)**RENAL OSTEODYSTROPHY IN MALTESE END-STAGE RENAL FAILURE PATIENTS**

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

Renal osteodystrophy (ROD) is an obligatory accompaniment of end-stage renal failure (ESRF). Recent research has crystallized three biochemical markers which together best approximate bone histomorphometry in assessing ROD. The spectrum of ROD in Malta, as well as the adequacy of its treatment in Maltese ESRF patients have never been studied. Besides, the symptomatology of this disease has been notoriously neglected by researchers in this field. We thus embarked on a prospective study to address these issues. The study was spread over 5 months (8/98-12/98). After training Renal Unit staff, most patients under our care attending the Renal Unit for haemodialysis (HD) sessions (n=36) and for chronic ambulatory peritoneal dialysis (CAPD) follow-up (n=27) were recruited. At the start of the study, they were asked to answer a supervised questionnaire on the symptomatology of ROD, which was purposely designed to maximize specificity. They were also questioned on their dietary phosphate control. Longitudinally, regular assessments of the patients' biochemical profile, dialysis adequacy and treatment were done (monthly for HD and 6-weekly for CAPD), with a single estimation of intact parathyroid hormone (iPTH), bone-specific alkaline phosphatase and serum pyridinoline cross-links in the middle of the study. Radiological investigations were done when indicated. The results are divulged, highlighting the importance of considering ROD, especially in its initial stages, as well as the need to monitor its treatment with regular iPTH assays in our patients.

FCO 04 (R240)**FUNCTIONAL ASSESSMENT OF BILATERAL AMPUTEES**

James N. Casha. *Dundee Limb Fitting Centre, Dundee, Scotland.*

Surviving bilateral amputees from the world's largest series of bilateral amputees were assessed for function, inability, prosthetic usage and stump conditions. From 366 bilateral amputees, 26 were still alive, and 21 were visited at home (80% response rate). There was a mean age of 68.8 years and a mean follow-up of 25.6 months. The patients were assessed using Russek's, Day's and Barthel's scoring systems. These were found to be useful, but required to be used in combination.

All of the patients fitted with a prosthesis continued to use them. 75% were still at home. The prostheses were important for the patient to cope at home. The results are excellent compared to the world literature.

FCO 05 (R106)**REVIEW OF VIOLENT DEATHS CAUSED WITH CRIMINAL INTENT (FACTORS INVOLVED IN MURDER CASES) IN MALTA OVER A TWENTY YEAR PERIOD FROM 1979 TO 1998.**

Antonella Brincat, Marie Therese Camilleri Podesta', Lucia Micallef-Hawkes, Safraz Ali. Department of Anatomy, University of Malta, Msida, Malta

The islands of Malta are not immune to murders and other violent deaths attributed to criminal activity. Moreover, the offender, motive, means and all the surrounding circumstances differ from one case to another. The need for a detailed analysis of the different elements connected with the victims of such deaths was felt. This study aims to analyse all cases of violent deaths occurring in Malta over the twenty-year period starting from 1979 to 1998. This period was subdivided into two decades so these could be compared. One reason for this division is to highlight whether violent deaths, in our islands are on the increase. However, the basis of the comparisons is not merely a statistical analysis with reference to number of such deaths over this period. Attention is also focused on the pathological nature and site of injuries sustained, trend of age groups, nationality and sex of the victims involved, methodology of the murder and means used to procure death. The data used for this study is derived from the reports of the autopsies performed during this twenty year period.

FCO 06 (R107)**AUDIT STUDY – RELEVANCE OF ANATOMY TEACHING TO MEDICAL STUDENTS ATTENDING THE MEDICAL COURSE AT THE UNIVERSITY OF MALTA**

Lucia Micallef-Hawkes, Marie Therese Camilleri Podesta', Antonella Brincat, Hermann Karl Borg, Department of Anatomy, University of Malta, Msida, Malta

The technique of teaching Anatomy to medical students at the University of Malta was audited. Each medical student from the 1st to the 5th year was sent a proforma sheet to be filled in and returned. The students were asked to assess the clinical relevance and appropriateness of teaching and desired emphasis of each anatomy subject taught.

The results and proposed change are presented. It is also proposed that this study (with future adaptations) is to become an on-going audit study within the Department of Anatomy.

FCO 07 (R078)**POST-OPERATIVE ANALGESIA REVISITED 1973-1998**

Dr A. Aquilina, Dr N. Azzopardi. Department of Anaesthesia, St Luke's Hospital, Guardamangia, Malta.

The authors endeavour to review the advances in post-operative pain relief that have occurred over the last 25 years with particular reference to the local setting. The increasing recognition that pain itself can adversely affect surgical outcome is emphasized together with the evidence that effective pain relief can reverse these complications. Post-operative pain relief can be classified into systemic and regional. The main improvements in systemic therapy are the following:

- (1) the use of paracetamol and non-steroidal anti-inflammatory drugs both as sole agents for post-operative pain relief as well as adjunctive therapy to decrease the requirement for opioids
- (2) the move away from intermittent administration of opioids towards patient-controlled analgesia and continuous opioid infusions.

The major innovation has been in the use of continuous regional blockade using epidural, spinal and other regional catheters. The indications, efficacy and side-effects of epidurals are discussed. The role of intrathecal and epidural opioids is also described. A brief mention is made of the use of clonidine administered both systemically and epidurally. Balanced analgesia combines systemic and regional techniques to achieve optimal patient satisfaction. The concept of pre-emptive analgesia is discussed.

FCO 08 (R099)

***IN VITRO* INDUCTION OF APOPTOSIS BY THE CONIFER *TETRACLINIS ARTICULATA* ESSENTIAL OIL – POSSIBILITIES FOR USE AS AN ANTI-NEOPLASTIC AGENT**

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An essential oil derived by steam distillation from the conifer *Tetraclinis articulata* (Vahl) Masters, was used to assess its *in vitro* bioactivity on human neoplastic cell lines. An analysis of the oil by gas chromatography has revealed that it is a mixture of several monoterpenoids. Research up to now has focused on showing that the oil induces a dose dependent cytotoxic effect. Concentration and kinetic studies have focused on monitoring changes in respiratory activity using a thiazolyl blue (MTT) assay as well as changes in protein synthesis using a methylene blue assay. The changes that accompany the cell death show the hallmarks of apoptosis. Condensation of the chromatin within the nucleus and the formation of apoptotic bodies was confirmed by fluorescent and light microscopy (quinacrine dihydrochloride and PAP staining). The appearance of a hypodiploid DNA peak was demonstrated using flow cytometry after propidium iodide (PI) staining. Apoptosis is usually accompanied by the activation of an endonuclease that results in the cleavage of the DNA into oligonucleosome fragments. Extraction of DNA from treated cells and subsequent conventional agarose gel electrophoresis confirms the presence of a DNA ladder. Additionally apoptosis is accompanied by the expression of a phosphatidyl serine on the outer layer of the cell membrane followed by cell membrane leakage. This has been shown by flow cytometry and fluorescent microscopy after double staining with PI and an annexin V – FITC antibody conjugate. The results of our studies show that the oil extract from *Tetraclinis articulata* contains a component(s) with anti-neoplastic activity.

FAP 01 (R138)

GENERAL PRACTICE: THE KEY TO HEALTH CARE IN A NEW ERA

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Good general practice is the provision of integrated accessible health care by general practitioners who are accountable for addressing the large majority of personal health care needs of all patients in their practice, developing a sustained partnership with them and practicing in the context of family and community. The unit of assessment for the operationalization of this definition is the episode of care structured and coded with the International Classification of Primary Care. Reasons for encounter, diagnoses and interventions form the core of the episode of care, consisting of one or more encounters, including changes in their relation over time ('transitions'). Since 1985 the Transition

Project has resulted in several large epidemiological reference data bases and clinical expert systems based on routine morbidity recording by general practitioners in the Netherlands, Poland, Japan and other countries. Since 1995 a complete computer based patient record (Transhis) is routinely used and both the conceptual and the practical consequences will be illustrated with the help of detailed data collected by approximately 50 general practitioners covering approximately 160,000 patient years, including well over 500,000 episodes of care and 300,000 prescriptions. The utility of these data is placed in the context of quality assurance, clinical practice, medical education and health policy. A perspective on health care systems in a new era, in which general practice fulfills its mission to the full extent will be developed.

FAP 02 (R112)

PRESENTATION OF AN ANALYSIS OF 500 CONSECUTIVE CONSULTATIONS, CODED WITH ICPC, IN A FAMILY DOCTOR'S PRACTICE. DO THEY REFLECT THE CORE OF GENERAL PRACTICE?

Denis Soler, Jean Karl Soler. *Malta College of Family Doctors, Malta*

The authors will present an analysis of 500 consecutive consultations in one typical family doctor's practice. The consultations were coded with the International Classification of Primary Care (ICPC), using custom-made computer software.

The authors will critically evaluate this data, and ask if the work of the family doctor reflects the core principles of Family Medicine and, if so, in what ways.

An introduction to the ICPC classification, and the principle of episode of care, will serve as a preamble to this discussion.

The age sex profile of the practice indicates that the patient population veers towards the older age groups. This population would be expected to present with diseases commoner in these groups.

Of the 500 consultations, 136 (27%), were for Chronic Cardiovascular conditions, hypertension topping the list at 125 consultations, followed by Respiratory tract conditions at 98 (19.6%) and musculoskeletal disorders at 49 (9.8%).

The authors present the details of the consultations and analyse the profile of the practice reviewed.

FAP 03 (R017)

VISION SCREENING IN MALTESE 3 YEAR-OLD KINDERGARTEN CHILDREN

Richard Zammit Primary Health Care, Malta

This study is an analysis of a pilot vision screening programme of 3 year-old-children in Maltese State kindergarten centres (1996-7). All children to be admitted in the kindergarten of Cospicua, Vittoriosa, Senglea, Kalkara, Paola, Tarxien, and St Lucia, (N=367) accompanied by their parents were medically examined prior to school entry by the School Health Team. During this visit the children were offered to participate in a visual acuity picture matching test. This screener tool is The Tokyo Metropolitan Vision Screening Test and is well tested on thousands of children in Japan.

Only 41% accepted to participate in this vision screening test initially. It was found that there was a significant direct relationship between participation and age of the child ($p > .00129$, correlation coefficient = +0.46) with maximal co-operation occurring after the child is 3 years 1 month of age.

In addition, there was a significant relationship between participation and social group of family ($p=0.016$, O.R.= 2.0, C.I.=1.1 to 3.7) and a significant relationship for level of education of the mother, defined as completion or otherwise of secondary level of education ($p=0.04$, O.R.=2.0, C.I. 1.0 to 3.8).

The acceptance rate of the screening test rose to 96% when this was attempted in the classroom itself with the help of individual kindergarten assistants.

Combining the data from the two screening attempts, and estimating the false negative cases from a representative sample ($n=13$) the following are the screener characteristics; Specificity = 96%, Sensitivity = 100%, Positive Predictive Value = 56%, and Negative Predictive Value = 100%. The Yield, that is the number of identified cases that benefited by treatment as a result of this screening process, amounted to 5%.

Recommendations: If screening is to be done on 3yr-old children -

1. The screening test should be held in the classroom setting.
2. The kindergarten assistant preteaches children matching.
3. The child should be older than 3years 1 month.

FAP 04 (R247)

BACTERIA, ANTIBIOTICS, ACNE AND DERMATOLOGISTS

(“BAAD SYNDROME”)

Joseph L. Pace. *Dermatology Clinic, St. Philip’s Hospital, St. Venera, Malta*

Antibiotic resistant bacteria may well prove to be the challenge of the next decade. The World Health Organisation, the World Medical Association, and even the EU have issued repeated stern warnings voicing their apprehension on this matter. In view of the increasing resistance of the acne bacillus to antibiotics, this presentation examines current accepted antibiotic usage by dermatologists in acne patients and proposes how a logical and effective antibiotic policy might help improve this serious situation for both the individual patient and the community.

FAP 05 (R224)

DOES ROUTINE CHILDHOOD IMMUNISATION HAVE TO BE COMPULSORY?

George Pollock. *Department of Public Health and Epidemiology, University of Birmingham, Birmingham, B15 2TT, U.K.*

Routine childhood immunisation against diphtheria, tetanus and poliomyelitis is required by law in Malta, France and the United States. In England, by contrast, the take-up of all childhood immunisation procedures depends on health education, informal persuasion, good organisation within Primary Health Care, and financial incentives offered by the Department of Health to General Practitioners to secure high take-up within their practices. A study of take-up in all four countries shows that the lack of legal enforcement in England does not result in any significant loss of performance in this aspect of disease prevention. In spite of cultural differences between the four countries, is it not time to re-examine the need for compulsion?

MED I 01 (R260)

HEPATITIS C

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Hepatitis C will conceivably be the single most important hepatological issue for the next two or three decades. The high rates of infection, spectrum of disease, emergence of treatment options and the lack of a vaccine are the major issues. The incidence of carriers in the UK is probably in the range of 0.05-0.1% but this increases to 1-2% in Mediterranean countries and even higher in other parts of the world (6% of equatorial Africa, 20% parts of Egypt).

Transmission: The commonest form of transmission is parenteral – receipt of blood products, intravenous drug users. Up to 70% of patients who ever injected drugs in the UK are hepatitis C positive. Sexual and vertical transmission are both possible but unusual. In about 40% of cases no risk factor for acquisition is identifiable.

Natural history and clinical features: Infection with hepatitis C is rarely symptomatic and it is unusual that it is identified as an episode of hepatitis. At least 85% of people who acquire hepatitis C become chronic carriers. About 20% of these will develop progressive liver disease that will lead to cirrhosis. The risk of developing hepatocellular carcinoma is about 2-3% per year once cirrhosis has developed. The time from infection to transmission to cirrhosis tends to range from 24-32 years but this is accelerated in alcohol consumers. The risk of disease may be higher with genotype 1b. Extrahepatic manifestations include lichen planus, porphyria cutanea tarda, thyroiditis, cryoglobulinaemia and glomerulonephritis. Diabetes mellitus and lymphoma have also been linked to hepatitis C.

Diagnosis and assessment: The current serological tests are much improved. Once the presence of antibody has been confirmed the patient should be screened for HCV RNA in serum. Positive cases or those with abnormal liver function tests need an ultrasound of the liver and a liver biopsy. The need for treatment is determined from the appearances of the liver biopsy, with particular regard to necroinflammatory activity and the degree of fibrosis present. All patients with cirrhosis need regular alpha-fetoprotein estimations and ultrasound assessments to detect early hepatocellular carcinoma. The role of genotyping or estimations of viral load are unclear.

Treatment: The trend is towards more aggressive treatment of the disease, the response to interferon is partly determined by the dose and duration of treatment. Simplistically, interferon leads to clearance of infection in 25%, control of infection during treatment but relapse on withdrawal in 25% and no response in 50%, interferon combined with ribavirin increases the response rate towards 50%. Liver transplantation is the only treatment available for advanced disease.

MED I 02 (R164)

CHRONIC HEPATITIS C AND ITS TREATMENT WITH INTERFERON ALPHA

2b

Alfred Caruana Galizia, *Department of Medicine, St. Luke's Hospital, G'Mangia, Malta*

25 patients with Chronic Hepatitis C were placed on treatment with Interferon Alpha 2b. 10 patients received treatment for a full 12 month period, and nine patients received treatment for 6 to 10 months. In the remaining patients treatment was discontinued early because of serious complications. The paper also comments on the mode of infection in this group of patients.

MED I 03 (R161)

EMERGING INFECTIOUS DISEASES: DO ALL DISEASES HAVE AN INFECTIVE AETIOLOGY?

A.J. Mifsud, *St. Bartholomew's and Royal London Hospitals, London, England*

Recent years have seen a remarkable reverse in the control of communicable disease.

Long-recognized infections such as malaria and dengue continue to spread relentlessly not only in the tropics but are also increasingly being imported to the developed world.

Familiar infections such as tuberculosis, the incidence of which had been decreasing in many parts of Europe and North America during the 1980s, are resurging, with the added concern of spreading multi-antibiotic resistance.

New infections have appeared and continue to spread at an alarming rate despite extensive public health programmes. On a world-wide perspective, the list is headed by HIV which is widely prevalent in most of Africa and Asia - screening of antenatal-clinic attenders identifies 15 to 30% HIV-positivity in many areas.

In the developed world, intensive farming techniques, together with changing lifestyles have resulted in increases in the incidence of gastro-intestinal infections caused by common pathogens (such as *Salmonella* spp.) and have also allowed the appearance of new pathogens such as *Escherichia coli* O157:H7 (the cause of haemolytic uraemic syndrome), *Cyclospora cayentanensis* (associated with soft fruit imported from parts of Central America) and even new variant Creutzfeldt Jacob Disease (a prion disease probably associated with eating beef infected with the Bovine Spongiform Encephalitis agent).

Finally, the list of diseases traditionally not considered to be caused by microbes but which have now been shown to have an infective aetiology continues to increase. Perhaps the best known is *Helicobacter pylori* which causes gastritis, peptic ulceration and even gastric carcinoma. Other emerging infections include Whipple disease shown to be caused by *Tropheryma whippelii*; Bell palsy, associated with *Borrelia burgdorferi* or herpes simplex virus type 1; and Kaposi sarcoma strongly associated with herpesvirus 8. A number of other diseases are tentatively associated with infective agents, including Crohn's disease, linked with *Mycobacterium paratuberculosis* and, perhaps most significantly in public health terms, coronary artery disease with *Chlamydia pneumoniae* infection.

MED I 04 (R032)

SEROPREVALENCE OF HEPATITIS A IN MALTESE ADULTS

Michael A. Borg, *Alfred Portelli. Department of Pathology, University of Malta Medical School, Malta*

Objectives: To determine the seroprevalence of hepatitis A virus (HAV) within the adult population of Malta.

Methods: Serum from blood investigations coincidentally taken for non-acute investigations in patients aged 20 - 85 visiting St. Luke's Hospital over a three month period in 1996 (n = 320) was retrieved and tested for anti-HAV antibodies by Elisa (Abbott, USA)

Results: Seroprevalence levels of anti-HAV antibody in Maltese adults fall into a pattern normally associated with low to intermediate prevalence countries.

Conclusions: (1) There is a statistically significant ($p < 0.001$) in Hepatitis A seroprevalence between the 31-40 and 41-50 age groups which is not apparent between any other age groups. This could coincide with major alterations in potable water supply which occurred in Malta in the

60's and 70's. (2) The seroprevalence rates in the under 40's are comparable with studies performed in other European countries in the Mediterranean and would therefore indicate that travellers to Malta are at no greater risk to this infection than these destinations. (3) Hepatitis A vaccination is recommended for Maltese travellers visiting high-risk countries especially in Eastern Europe, Africa, South America and Southeast Asia.

MED I 05 (R097)

A SURVEY OF HEREDITARY NEUROLOGICAL DISEASES IN MALTA

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Background to the study. Inherited neurological diseases are a group of disabling and often progressive conditions. They have serious implications for the affected individuals, their families and society. A neurogenetics clinic was established by the collaborative effort of the authors. Its aims were to: a. set up a database of genetically determined neurological diseases in Malta; b. compare their prevalence with that of other countries; c. provide genetic counselling for affected families; d. assess the long-term health needs of affected families.

Materials and methods: Case ascertainment was through the neurology clinic. Diagnosis was made on the basis of clinical features and neurological examination supported by relevant investigations. Detailed pedigrees were obtained and genetic studies performed where applicable. Families were given genetic counselling.

Results: Apart from Huntington's disease, which is being presented as a separate paper, the most important conditions were the muscular dystrophies and the hereditary motor and sensory neuropathies each of which is represented by several different clinical types and by autosomal dominant, recessive and X-linked modes of inheritance. Families with inherited forms of spino cerebellar ataxia, congenital insensitivity to pain, spastic paraplegia, and Wilson's disease are described. Other conditions were neurofibromatosis, tuberous sclerosis ataxia telangiectasia. The disabilities resulting from these conditions are discussed.

The autosomal dominant and X-linked conditions present special problems in relation to pre-marital counselling. Individuals may be unaffected or mildly affected at the time of marriage and it is essential that they and their future spouses are aware of the implications of subsequent disability and recurrence risks for the offspring.

MED I 06 (R153)

THE THERAPEUTIC MANAGEMENT OF EPILEPSY WITH THE NEWER ANTIEPILEPTIC DRUGS

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Epilepsy is a common neurological condition with world-wide prevalence of 0.5-1%, and an estimated incidence of 1500-2000 in the Maltese population. In the last decade newer antiepileptic drugs (AED) have become available which have revolutionised treatment to patients. In the last 5 years, three of them, namely vigabatrin, lamotrigine and gabapentin were marketed and approved for use, as non formulary items, within the health services in Malta. In this study, the therapeutic uses and efficacies of these drugs among Maltese patients were compared to the traditional AEDs. Following approval by the Ethics

Committee, a total of 113 adult patients with refractory epilepsy were recruited for this study, from the Day Ward, Outpatients Department, St Luke's Hospital.

Fifty one patients were on newer AED treatment as adjunct therapy while 62 were on traditional AED therapy alone. Of the former, 34 had received vigabatrin, 29 lamotrigine and 5 had received gabapentin at some stage since the introduction of the new drugs. The data was analysed using a Pearson Chisquared statistical method of analysis. Overall the data obtained by systematic questionnaires showed that patients on newer AEDs benefited from this treatment. There were 33 patents (48.5%) on newer AEDs who achieved >50 % reduction in seizure frequency while only 3 patients (10%) on traditional AEDs achieved similar seizure control ($p < 0.005$). 23.5% of patients benefited from changes to shorter duration and milder types of epileptic seizures when compared to 10% on traditional AEDs ($p = 0.0008$). The incidence of side effects was higher in patients on traditional AEDs and several patients reported improvements in cognitive function, emotional well being, energy and social function. Mono therapy with newer AEDs was never established in local adult population. This study has shown that patients with refractory epilepsy do benefit with the use of newer AEDs and these medications should be made available to patients with epilepsy.

MED I 07 (R234)

CLINICAL GUIDELINES FOR THE INITIAL MANAGEMENT OF ADULTS WITH COMMUNITY ACQUIRED PNEUMONIA

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Introduction: Community acquired pneumonia is a common and serious problem. It is one of the leading causes of death from infectious diseases. Hospitalization is required in approximately 20% of patients and increases the cost of treatment considerably. One of the most important decisions facing the physician is when should a patient with pneumonia be admitted? What factors predict complications and which antibiotics should be used? Since atypical pathogens are common and decreased sensitivity to penicillin and Beta-lactamase production is on the increase, the antibiotics of choice have changed.

Broad spectrum, empiric antibiotic therapy may improve the chance of success and decrease overall costs and morbidity. In patients who are younger than 60 years and have no co-morbid conditions a macolide antibiotic such as erythromycin or if intolerant one of the newer agents such as clarithromycin or azithromycin may be prescribed. For patients 60 years of age or older or in those with a co-morbid condition one can use a 2nd generation cephalosporin, a Beta-lactam/ Beta-lactamase combination or trimethoprim-sulphamethoxazole. If Legionella is a possible pathogen a macrolide is also recommended. In the sickest patients a macolide, cephalosporin and an aminoglycoside used in combination is recommended.

MED I 08 (R124)**THE ROLE OF INDOOR AND OUTDOOR AIRBORNE PARTICULATE MATTER IN RELATION TO ASTHMA AND OTHER ALLERGIC CONDITIONS IN MALTA.**

Joanna Pullicino, Dr. Stephen Montefort, Dr. Adriana Vella. Dept. of Medicine and Dept. of Biology, University of Malta, Msida.

Asthma and associated allergic conditions are common ailments in childhood. Precipitating factors are found both in the indoor and outdoor environment. In this study, outdoor (O) particulate matter (PM) and pollen (PL) were monitored in 19 localities in Malta using the gravimetric technique; a particle counter was used to investigate the size distribution of indoor 0.3 μ , 0.5 μ and 5.0 μ PM in 10 localities. Data from 3953, mostly 13-14 year olds participating in the International Study of Asthma and Allergic Conditions (ISAAC), was analysed together with the environmental measures undertaken to investigate any associations. National means for PM and PL counts obtained in Autumn (A) and Winter (W) were calculated; common areas having above-average (ab-av) counts and asthma related symptoms were identified. Paceville, Mellieha and Mqabba found in the Central North (CN), North and South regions respectively had ab-av A and W OPM. The CN and Mqabba had a high wheezing prevalence. Also Zebbug, in the West had high wheezing rates and ab-av A OPM. Children living in the North and CN reported high rates of eczema and rhinitic symptoms. Floriana, in the Grand Harbour GH region and Mellieha had ab-av A and W PL counts. The CN, East and North regions had ab-av A PL counts. Regions having ab-av 0.3 μ PM in A and W were the CN, Central (C), GH and East represented by Swieqi, St. Venera, Floriana and Zejtun respectively. In Zebbug, ab-av W 0.3 μ PM counts were obtained. Even the C had ab-av wheezing. Zejtun had a high prevalence of eczema and also ab-av A OPM. Ab-av counts for total (0.3 μ + 0.5 μ + 5.0 μ) indoor PM in A and W were found in the CN, East and South regions. The Central West region represented by Balzan and Lija showed a high prevalence of wheezing, rhinitis and eczema; this region had ab-av levels of W OPM and PL. Symptoms of wheezing, exercise-induced wheezing and itchy eyes experienced by children were associated to ultrafine 0.3 μ PM but not to the relatively larger 5.0 μ PM. Disturbed night sleep was associated to 0.5 μ particles. Therefore, finer PM increases the chance of experiencing asthma related symptoms. Eczema and wheezing episodes were affected by OPM but not by pollen suggesting that A and W PL may not be allergenic. OPM also affected rhinitic symptoms. This study highlights the fact that asthma and allergies in Malta are affected by indoor and outdoor allergens.

MED I 09 (R159)**SMOKING BEHAVIOUR WITH ACUTE CHEST PAIN. HOW MANY PATIENTS GO ON SMOKING?**

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Purpose: To establish what proportion of patients hospitalized with acute chest pain for coronary care continue to smoke after the onset of chest pain, and to compare the characteristics of those who stop smoking with those who persist.

Methods: 154 smokers, (male 145, female 9, mean age 56.0, SD 12.0) were hospitalized with either myocardial infarction or unstable angina, at the coronary care unit, St. Luke's Hospital between June 96 and May 97. Blood Carboxy Hemoglobin levels (CO-HB) were determined on admission, and a questionnaire was administered on the following day.

Results: 47 (30.5%) of patients stated they had continued smoking after the onset of chest pain. However, 11 out of the 107 (69.5%) patients who stated they had not smoked after the onset of chest pain had blood CO-Hb levels consistent with continued smoking after chest pain. When only patients presenting to hospital within 8 hours of onset were considered (n=117), patients who had smoked after the onset of chest pain (n=43) had a mean CO-Hb of 4.47 g/dl (SD 1.93) while for the other 74 patients it was 2.67 g/dl (SD 1.57, p<0.001). The mean interval between onset of chest pain and time of hospitalization was 2.90 (SD 2.12) hours for the persistent smokers and 1.89 (SD 1.57, p<0.01) for those who stopped. There was no difference in the mean age of both groups.

Conclusion: 37.1% of patients hospitalized for acute coronary care continued smoking despite the onset of chest pain. Persistent smokers presented later, and had a higher mean CO-Hb on admission.

Clinical implications: Patients who continue smoking after onset of chest pain, are more likely to benefit from oxygen therapy. Furthermore this behaviour is associated with a delay in presentation.

MED II 01 (R261)

THE ROYAL COLLEGE OF PHYSICIANS (LONDON), ITS ROLE IN EDUCATION AND INTERNATIONAL MEDICAL AFFAIRS

L. Rees (*Abstract not available at time of going to press*)

MED II 02 (R150)

TYPE 2 DIABETES MELLITUS: THE SITUATION IN MALTA

Joseph Azzopardi, C. Bajada, A. Ellul, S. Fava, K. Gatt. *The Diabetes Clinic, St. Luke's Hospital, G'Mangia, Malta.*

One thousand five hundred and forty eight (1548) patients representative of the entire Type 2 diabetes population in Malta were studied. The paper will present data on patients' life style, risk factors, form of treatment, degree of education on diabetes, intermediate metabolic outcomes, ophthalmic and feet observations; self monitoring and complications of diabetes.

In October 1989 the World Health Organisation and the International Diabetes Federation launched the St. Vincent programme for improvement of diabetes care in Europe. This led to the development of the DiabCare computer program and initiative for quality assurance of diabetes health care provision. Malta was one of the pioneers involved in the implementation of this program.

The DiabCare computer programme enables health care personnel to record and analyse data from a large number of patients and to compare results with those of other centres. Given an appropriate selection of patients, the DiabCare program can be used for epidemiological studies. The DiabCare computer program was used as an important tool in this present study.

Besides presenting a detailed study of the present situation in Malta the paper should serve as a basis for planning future care of people with diabetes in Malta.

MED II 03 (R027)

EVIDENCE OF FAMILIAL PREDISPOSITION TO RENAL DISEASE IN TYPE 2 DIABETES MELLITUS

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The objective of the study was to determine whether there is a familial predisposition to the development of diabetic renal disease in patients with type 2 diabetes mellitus. Thirty-six type 2 diabetic patients with evidence of nephropathy were identified through routine screening. These had 15 living diabetic sibs. For each of these sibs, 2 diabetic controls that were matched for age, gender and duration of diabetes were randomly selected. Results - Sibs of probands with diabetic nephropathy and controls were well-matched for age, gender, systolic and diastolic blood pressure, weight and height. There were 7/15 (16.7%) sibs and 5/30 (16.7%) controls with diabetic nephropathy ($p=0.04$). In conclusion, our data suggest there is a familial predisposition to diabetic nephropathy in type 2 individuals.

MED II 04 (R108)

THE NEW ADA AND CLASSICAL WHO CRITERIA FOR THE DIAGNOSIS OF DIABETES MELLITUS: SHOULD WE DISCONTINUE HOSPITAL USE OF THE OGTT?

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The American Diabetes Association (ADA) has recently revised its guidelines for the diagnosis of diabetes mellitus. Most importantly, it advocates the use of fasting plasma glucose rather than a full oral glucose tolerance test, on the grounds of simplicity and equivalence. This retrospective study uses 2 years' OGTT data, in an effort to see if the termination of OGTT as a diagnostic test can be recommended for our hospital based practice. 2258 OGTT results were collected for 1995 and 1996. Of these 2243 were suitable for analysis. These OGTT results were then scored according to the new ADA and classical WHO criteria. The results show a high level of concordance for the number of patients diagnosed as diabetes, impaired glucose tolerance/impaired fasting glucose or both, with a Cohen's Kappa of >0.99 in all three groups. The phi correlation coefficient for diabetes was strong ($\phi = 0.74$) but weak for IGT ($\phi = 0.17$). Pooling all abnormal results, a good power of relationship ($\phi = 0.60$) is achieved. We suggest that we should adopt the ADA criteria in hospital practice.

MED II 05 (R115)

DIABETES MELLITUS AND ITS COMPLICATIONS IN MALTESE PATIENTS WITH ACROMEGALY

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Glucose intolerance occurring secondary to endocrine disorders is usually of moderate severity and overt diabetes is an uncommon event. Similarly, retinal, renal and neurological complications have been reported to be uncommon in patients with endocrinopathy-associated diabetes. It has been suggested that patients with endocrinopathies who develop severe glucose intolerance and diabetes have an underlying genetic predisposition to diabetes. In Malta, there is a high incidence and prevalence of both diabetes mellitus and acromegaly as compared to other countries. The prevalence and severity of impaired glucose tolerance and diabetes mellitus in

thirty five Maltese patients with acromegaly were studied. A retrospective analysis of the response in glycaemic control to transsphenoidal surgery, radiotherapy and medical therapy was carried out. The development of long term micro- and macrovascular complications of diabetes was also assessed and relationship to disease activity was examined.

MED II 06 (R018)

ADRENAL HEMORRHAGE: A TWENTY-FIVE YEAR RETROSPECTIVE REVIEW

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Adrenal hemorrhage is encountered in clinical situations other than the Waterhouse-Friederichsen syndrome. In cases associated with sepsis, stress and disseminated intravascular coagulation a missed diagnosis of adrenal insufficiency secondary to bilateral adrenal hemorrhage can lead to fatal shock and hypotension.

Purpose: To examine in a systematic fashion the presentation, associated clinical conditions and outcomes of patients with adrenal hemorrhage at the Mayo Clinic between 1972 and 1997 (25 years).

Patient Identification: Patient records were identified in whom adrenal hemorrhage occurred. Exclusion criteria included: age < 16 years, presence of hemorrhage in association with an adrenal pheochromocytoma or carcinoma and hemorrhage in association with nephrectomy or adrenalectomy.

Data Extraction: The records of 140 patients identified by the process outlined above were analyzed systematically. Variables extracted pertained to clinical findings, laboratory abnormalities, clinical suspicion of the diagnosis and outcome.

Results: Adrenal Hemorrhage was most commonly associated with septicemia or situations of severe physical stress. Other important associations were with the antiphospholipid antibody or 'lupus anticoagulant' syndrome, heparin-associated thrombocytopenia, trauma or abdominal surgery and with therapeutic anticoagulation. A significant number of patients (n=23) presented as incidental findings on radiological studies obtained for other purposes. Steroid treatment did not seem to alter the poor outcome (92.6% mortality) seen in the stress / sepsis group.

Conclusions: Although it is hoped that early intervention with steroid therapy may prevent unfavorable outcomes in adrenal hemorrhage, one must bear in mind that hemorrhage associated with severe stress or sepsis may be a marker of severe, preterminal, physiologic stress rather than a disease entity in itself.

MED II 07 (R045)

UTILISATION OF A FUNCTIONAL ASSESSMENT TOOL TO CLASSIFY SUITABILITY FOR ADMISSION TO LONG-TERM CARE

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The objective classification of older people applying for admission to long-term care, based on level of dependency, would help the pre-admission assessment process to identify those cases that can still be managed at home from those that require institutional placement. The Survey Version of the Clifton Assessment Procedures for the Elderly (CAPE) (Pattie, 1981) is one such tool, as it grades older people into 5 levels of dependency. It has also been stated by Pattie that, "its validity would appear to merit its appropriateness in helping to make recommendations useful in the management and care of the elderly."

Objective: To identify whether the CAPE Survey Score is a useful tool to help in the classification of applicants for admission to St Vincent de Paule Residence (SVPR).

Method: During 1997, 105 consecutive applicants for admission to SVPR were interviewed at source utilising a modified form of the CAPE Survey Score. Results were analysed taken also into consideration the reasons for the application, rehabilitation potential, support level, and housing situation. Each applicant was subsequently classified according to suitability for the various levels of care available.

Results: 43% of all applicants required admission to a nursing home; 2% - needed psychogeriatric care; 10% - needed residential care; 21% - required acute medical care and rehabilitation; 16% - could remain at home or be discharged home with support; 6% - could remain at home or be discharged home without support; 2% - required re-housing.

Conclusion: The Survey Version of the CAPE was found to be a useful tool to help identify actual care needs of applications to long-term care and could be introduced in everyday practice in Malta for assessing applications for long-term care.

Reference:

Pattie, A. H. (1981). A Survey Version of the Clifton Assessment Procedures for the Elderly (CAPE). *British Journal Of Clinical Psychology*, 20, 173 - 178.

MED II 08 (R016)

AN AUDIT OF PATIENTS REFERRED TO A SPECIALIZED GERIATRIC UNIT

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Introduction: Zammit Clapp Hospital (ZCH) provides a specialized service in geriatric medicine by an interdisciplinary team. The selection of patients referred from other hospital departments is an important task that aims at the more effective use of available resources. Factors taken into consideration before deciding transfer include the rehabilitation potential of patients, their age, their previous functional levels, the presenting and ongoing illnesses and problems, the views of their carers and the intention of returning to live in the community. The aim of this study is to describe the characteristics of such referrals and their outcome. **Method:** A retrospective evaluation was carried out on consultations or requests for transfer to ZCH from other government hospitals for 1998. Data recorded included patient's age, sex, main diagnosis, referring department, acceptance for transfer and reasons for refusal. Hospital statistics for the period 1991 - 1997 were available and compared. **Results:** The number of referrals has doubled over this 7 year period, and exceeded 1000 requests for 1998. The statistics show a yearly acceptance rate ranging from 61 to 69 %. In 1998, referrals came from the different departments as follows: Medicine (52%), Orthopedics (29%), Surgery (17%) and others. The mean age of the referred patients was 77.9 years for males and 78.2 years for females, whereas the mean age of those accepted was 78.1 years and 78.1 years respectively. The six most common main diagnoses were fractured femur (19.6%), stroke (17.1%), chest infection (9%), joint replacement (8%), heart failure (5.5%) and amputations (3.1%), these comprising 62.3% of all referrals. Patients were not accepted for further management (31.1%) because they had recovered and regained previous functional status (11.8%), because a decision for long-term care had been taken (5.5%), or because the patient was too unwell or further treatment was required at the referring hospital (2%). Other referred patients (7.8%) would have been accepted but had been discharged home before they were transferred or refused transfer. Another 3.6% died at the referring hospital while 0.4% were too young. **Conclusion:** Selecting patients for geriatric management and rehabilitation

helps to target ZCH services for those patients who really require the specialized care provided by an interdisciplinary team.

MED II 09 (R011)

CHURG-STRAUSS SYNDROME WITH CARDIAC INVOLVEMENT AND LEFT VENTRICULAR FAILURE

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The Churg Strauss syndrome is characterised by a history of asthma and paranasal sinus disease, eosinophilia of >0%, non-fixed pulmonary infiltrates on chest radiography and vasculitis which may affect multiple organ systems. The condition usually manifests in the fourth decade.

We present a 21 year old female with a history of asthma since one year of age who developed symptoms and signs of pneumonia, a pulmonary infiltrate on chest radiograph and eosinophilia. This was followed a few weeks later by vasculitis which involved the skin and myocardium and which was associated with a peripheral eosinophilia of more than 80%. Physical examination revealed palpable purpura and signs of left ventricular failure. Echocardiography confirmed significant diminution of left ventricular contractility. A rapid improvement was observed after steroid therapy. Repeat echocardiography two months later showed normal LV function.

In this presentation we review the cardiac manifestations of the Churg Strauss syndrome and its management.

ONC 01 (R229)

BOFFA ONCOLOGY DEPARTMENT PARTICIPATION IN MULTI-CENTRE CLINICAL TRIALS IN BREAST CANCER

Stephen Brincat, V. Muscat. *Sir Paul Boffa Hospital, Floriana, Malta*

The Oncology Department of Sir Paul Boffa Hospital is presently participating in two major multicentre early breast cancer clinical trials. The first is the ABC (Adjuvant Breast Cancer) trial which we joined in March 1994. We have now entered around 70 patients into this trial which seeks to test the value of adding chemotherapy and/or ovarian ablation in pre-menopausal women to adjuvant Tamoxifen in women, with early breast cancer.

The second trial which we are just joining is the Inter Group Exemestane Study which will be testing the validity of switching women with early breast cancer on adjuvant Tamoxifen for 2-3 years to Exemestane for the remainder of the time up to 5 years. The rationale of both these trials will be examined together with an overview of the studies and their relevance to our practice.

ONC 02 (R127)

IMPORTANT CONCEPTS IN THE MANAGEMENT OF TESTICULAR CANCER

David J. Debono, Provena-St. Mary's Hospital, Kankakee, Illinois, USA

With the advent of cisplatin-based chemotherapy, testicular cancer has become a highly curable neoplasm. Recent studies have refined treatment and management strategies and will be reviewed.

Is Post-chemotherapy retroperitoneal lymph node dissection (PC-RPLND) necessary in all patients with non-seminoma?

We studied 295 consecutive patients cared for at Indiana University from 1987-1994. The study revealed that patients achieving a complete serologic and radiographic response do not require PC-RPLND. They can expect a 92% long-term survival. Patients who are teratoma-negative,

achieve a serologic CR, and a >90% radiographic regression are rare (<10% of pts). These patients were routinely followed without surgery, but they had a somewhat inferior outcome (78% long-term survival). Their surgical management remains controversial.

Is Bleomycin necessary in patients with good-risk disease?

There have been four major studies assessing this question. Only the study from Memorial Sloan Kettering (MSKCC) showed that bleomycin might be safely omitted. They did two consecutive randomized studies of four cycles of etoposide/cisplatin (EP). The 214 pts who ultimately received EP achieved a CR rate of 91% and 86% are long-term survivors. The studies from the Australian Germ Cell Trial Group, the EORTC, and from ECOG all favored the inclusion of bleomycin. ECOG studied three cycles of EP plus bleomycin (BEP) versus three cycles of EP. The study clearly favored BEP, and this remains the American standard. Four cycles of EP may be equivalent to three cycles of BEP.

Is carboplatin equivalent to cisplatin?

Two major studies have assessed this question. Investigators from MSKCC compared four cycles of EP to four cycles of EC (etoposide/carboplatin). The MRC/EORTC compared BEP to EC plus bleomycin (BEC). Both studies convincingly showed that cisplatin is superior to carboplatin.

Can follow-up of patients stop at five years?

It is now clear that late relapses occur in patients with testicular cancer. Investigators from Indiana University reviewed the records of 81 patients with late relapse of testicular cancer. The range from time of original diagnosis to late relapse was 2-32 years (median = 6.2 years). Most patients had non-seminoma at original diagnosis, though 2 had pure seminoma. Late relapse is rarely curable with chemotherapy, and surgical management is preferred. No patients undergoing original RPLND at Indiana University had a late relapse in the RPLND field. Thus, experienced surgeons may be important in avoiding late relapse. The risk of late relapse appears to be 3% in patients who are in CR at 2 years. These patients require lifetime monitoring.

ONC 03 (R157)

CHILDHOOD ACUTE LYMPHOBLASTIC LEUKAEMIA IN MALTA.

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Background: Acute Lymphoblastic Leukaemia is one of the commonest cancers in Maltese children. The true incidence of this disease and the survival of the patients have not been studied before.

Methods: A retrospective analysis of children with Acute Lymphoblastic Leukaemia from 1980 to 1997 was undertaken. The data was obtained from the Cancer Registry and the patients' clinical records. The age and sex distribution together with the incidence of the disease were worked out. The event free survival and the overall survival were estimated.

Findings: The incidence of Acute Lymphoblastic Leukaemia in the Maltese paediatric population was 38 cases per million per year. This figure was comparable to the rest of the developed countries. There was a peak in the number of cases between the ages of one and four years. A smaller peak was noted at the ages of nine and ten years. The disease was twice as common in males than in females. The event free survival was 48.5%. The EFS for the period 1981 - 1990 was 42% and the EFS for 1991 - 1997 was 51%. The EFS for the female patients was 65.2% and the EFS for the male patients was 39.4%. The EFS for patients presenting with a total white blood count

of $<10 \times 10^9/l$ was 74.8%. The EFS for patients presenting with total white blood counts of $10 - <50$ and $50 \times 10^9/l$ were 47.8% and 30.3% respectively. Patient gender and presenting total WBC were a strong predictive factor of patient outcome.

ONC 04 (R175)

¹³¹I TREATMENT OF THYROID CARCINOMA IN THE RADIO ISOTOPE UNIT AT SIR PAUL BOFFA HOSPITAL

Nadia Camilleri, Philip Camilleri, Stephen Brincat, Victor Muscat. Sir Paul Boffa Hospital, Floriana, Malta

The Radioisotope Unit at Sir Paul Boffa Hospital treated its first patient suffering from thyroid cancer in April 1997. Since then we have treated 35 patients given a total of 43 high dose radioactive ¹³¹I treatments up to 1st February 1999. We will review the treatments of these patients and the management of thyroid carcinoma in general.

ONC 05 (R141)

DOES FOLLOW-UP MAKE A DIFFERENCE IN THE OUTCOME OF RENAL CELL CARCINOMA?

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Aim: To determine the outcome of follow-up of radical nephrectomy and assess cost-effectiveness of follow-up.

Materials and Methods: A retrospective review of medical records of the 144 patients who had a radical nephrectomy over a 10 year period in our hospital was performed. Operative details, and pathological diagnosis were obtained from the records. Basic follow-up involved clinical examination, FBC, U+E and CXR 3 monthly for the first year, review 6 monthly in the second and yearly follow-up thereafter. Details with regard to costs of investigation and follow-up were obtained from NHS management sources with our hospital.

Results: The crude 5 year survival in our hospital is 58.3%. There were a total of 651 follow-up visits with 504 blood investigations and 386 X-Ray requests. The most significant factors related to outcome were vascular invasion ($p=0.01$), capsular breach ($p=0.0002$) and lymph node involvement ($p<0.0001$). Diagnosis of metastasis within the first year of follow-up was associated with a mean survival of two months. Follow-up allowed us to identify only 4 operable solitary lung metastasis at a follow-up cost of £9998.50 each.

Conclusions: The most important determinant of outcome is the stage of tumour at operation. More accurate pre-operative assessment with a CT of the chest and abdomen would allow better surgical case-selection. Follow-up may influence survival for a small number of cases at prohibitive costs.

CVS 01 (R157)

RECENT TRENDS IN INTERVENTIONAL CARDIOLOGY

A. Fenech (abstract not available at time of going to press)

CVS 02 (R102)

C-FOS AND C-JUN EXPRESSION, CELL PROLIFERATION AND APOPTOSIS IN HUMAN SAPHENOUS VEIN PREPARED FOR CORONARY ARTERY BYPASS GRAFTING

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Introduction: Early and late saphenous vein graft failures are a major complication of coronary artery bypass surgery. Early failure occurs as a result of thrombosis whereas late failure is due to the abnormal proliferation and migration of vascular smooth muscle cells (VSMC) into the vessel lumen and is also associated with apoptosis of VSMC. We hypothesized that surgical trauma induced the transcription factors *c-fos*, and *c-jun*. AP-1 (a heterodimer of c-Fos and c-Jun) causes the transcription of cyclin D which is known to accelerate cell proliferation. In addition, *c-fos* and *c-jun* are also involved in the cell death pathway leading to apoptosis. **Methods and Results:** We investigated the expression of the early response genes, *c-fos*, and *c-jun* in human saphenous vein before and after preparation for grafting and correlated this with cell proliferation and apoptosis. Freshly isolated saphenous vein was harvested using a no-touch technique immediately following the first incision. Surgically prepared vein consisted of distended (350mmHg, for 2 minutes) or non-distended segments of vein maintained in serum free RPMI at 37°C and 5% CO₂ for various time intervals. *C-fos*, and *c-jun* expression were detected by Northern analysis of RNA using ³²P labeled cDNA probes and quantified by densitometry. Cell proliferation and apoptosis were determined by ³H thymidine incorporation and TUNEL respectively. Surgically prepared vein synthesized *c-fos* and *c-jun* 40 minutes following harvesting and by 1 hour there was a significant increase in *c-fos* mRNA in distended compared to non-distended vein. Expression of *c-fos* and *c-jun* mRNA returned to basal levels 24 hours after isolation of saphenous vein. At the protein level, c-Fos increased and c-Jun decreased in surgically prepared vein 24 hours after harvesting. There was a significant increase in vascular cell proliferation in the non-distended compared to the distended vein 1279 (218) dpm/μg DNA (SEM) vs 863 (155) p<0.05. In addition, the apoptotic index (SEM) was significantly lower in non-distended vs distended vein, 0 (0.0) vs 8.11 (5.0) for intima and 0.82 (0.2) vs 5.5 (1.5) for media p<0.05. These findings demonstrate that surgical preparation of human saphenous vein modulates expression of *c-fos* and *c-jun* mRNA, proliferation and apoptosis when compared with non-distended vein. It is likely that these findings influence the failure of saphenous vein grafts

CVS 03 (R205)

MOLECULAR GENETICS OF CARDIAC ARRHYTHMIAS

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The Long QT Syndrome (LQTS) and the Brugada syndrome (BS) have a characteristic anomalies in the electrocardiographic (ECG) patterns. It has been suggested that transmural differences in action potential morphology may underlie pathogenesis. Theoretically, anomalies in several ionic currents may be responsible, among which the transient outward potassium current, the calcium current and the sodium current. Because of the notion that pharmacological sodium channel blockade elicits or worsens the ECG features of BS, we regarded the sodium ion channel SCN5A as a candidate gene.

Mutational analysis of SCN5A was performed in families and sporadic patients with the LQTS3 and the Brugada syndrome by screening the coding region and exon-intron junctions of the gene by single-strand conformation polymorphism analysis followed by DNA sequence analysis. The functional consequences of mutations were assessed by heterologous expression of mutant channels in *Xenopus* oocytes.

In LQTS3 patients, two missense mutations were identified. In patients/families with the Brugada syndrome, four mutations were identified: two were missense mutations and two were in-frame insertions leading to the insertion of an additional amino acid at the protein. Based on data obtained from functional analysis of heterologously expressed mutant channels, mutations associated with the Brugada syndrome alter sodium channel kinetics and lead to reduced sodium current availability during the action potential upstroke.

Thus, LQTS3 and Brugada syndrome are allelic disorders with some common clinical features. Mutations in the cardiac sodium channel gene affect sodium channel function with direct consequences for depolarisation and/or repolarisation characteristics of cardiac muscle.

CVS 04 (R171)

MICROINFARCTION DURING PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY ASSESSED BY TROPONIN T RELEASE

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Balloon inflation during Percutaneous Transluminal Coronary Angioplasty (PTCA) causes temporary interruption of coronary blood flow. Although an elevation of Creatine Kinase (CK) or its isoenzyme CKMB has been documented in successful angioplasties, this does not necessarily reflect myocardial necrosis. Troponin T (TnT), an early and highly specific marker of myocardial injury, was used to diagnose microinfarcts which otherwise would not be detected by conventional serum markers.

Methods: Fifty consecutive patients (pts) (mean age 60 years, 40 males, 10 females) with stable angina or residual stenosis after myocardial infarction (MI) who were subjected to PTCA of 1 or more lesions had CK, CKMB and TnT assays performed immediately before, 4 hours (hrs) and 24 hrs after PTCA. Pts who suffered from acute MI or unstable angina within the fortnight prior to the procedure were excluded. CK >200 IU/L, CKMB >25 IU/L and TnT >0.2 µg/l were considered as indicating myocardial injury.

Results: Fourteen pts had multilesion PTCA and 1 pt had graft dilatation. A stent was deployed in 11 pts, 2 as a bailout procedure. All pts had a successful PTCA. TnT was significantly elevated in 2 pts both at 4 hrs and 24 hrs after PTCA. 5 pts had a TnT rise only at 4 hrs after PTCA and 4 pts only at 24 hrs after PTCA. There was no concomitant rise of CK or CKMB. Three pts had a significant CK and CKMB rise, 4 pts had a CK rise only and 13 pts had a CKMB rise only. There was no correlation between time of balloon inflation and amount of TnT release. Only 2 of the 14 pts who underwent multilesion PTCA had a TnT rise. TnT was elevated in 1 case of stent deployment performed as bailout for dissection. Of the 6 lesions complicated by minor dissection, only 1 showed a TnT rise. One dilatation was complicated by coronary spasm with an associated TnT rise.

Conclusion: PTCA can result in significant myocardial microinfarction. The myocardium appears to tolerate temporary regional ischaemia very well, as determined by the absence of correlation between TnT elevation and high balloon inflation times and multilesion PTCA. Side-branch occlusion may be an underlying mechanism for myocardial injury.

CVS 05 (R119)

HAEMODYNAMIC TOLERANCE TO ACE INHIBITORS AFTER CORONARY ARTERY BYPASS SURGERY

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Objective: Several studies have shown angiotensin-converting enzyme (ACE) inhibitors to confer significant mortality and morbidity benefits in heart failure. First-dose hypotension may necessitate interruption of such therapy. This is more likely to occur if the ACE inhibitor is administered early after coronary artery bypass grafting (CABG). The purpose of this study was to analyse the haemodynamic tolerance to early post-operative treatment with perindopril and enalapril in patients with impaired renal and ventricular function.

Methods: Eighty one consecutive CABG patients with a previous myocardial infarction, impaired pre-operative left ventricular ejection fraction (LVEF) on ventriculography and moderately impaired renal function (serum creatinine of 1115-150mmol/l) were randomised into 3 groups to receive oral placebo, perindopril 4 mg or enalapril 5 mg once daily. Groups were subdivided into those with mild ventricular dysfunction (LVEF=35-65%, n=20) and significant ventricular dysfunction (LVEF<35%, n=7). Exclusion criteria included oliguria (<0.5ml/kg/hr) or inotrope dependence at the point of entry on the first post-operative day. Intolerance to ACE inhibitor was defined as hypotension (<95mmHg systolic blood pressure or a decrease exceeding 25mmHg in systolic blood pressure) leading to oliguria (<0.5ml/kg/hr) which was unresponsive to intravenous furosemide (20mg). In such cases ACE inhibitor treatment was discontinued and patients commenced on dopamine.

Results: In the groups with mild ventricular dysfunction (LVEF=35-65%) perindopril was discontinued in 1/20 and enalapril in 4/20 patients (p=ns). However, in the groups with significant ventricular dysfunction (LVEF <35%) perindopril was discontinued in 2/7 and enalapril in 7/7 patients (p=0.02).

Conclusion: Our results suggest that after CABG, patients with moderately impaired renal function and significant ventricular dysfunction do not tolerate ACE inhibitors well when these were commenced on the first post-operative day. Perindopril was associated with less haemodynamic deterioration than enalapril and may therefore be advantageous in this setting.

CVS 06 (R064)

MEDIUM TERM FOLLOW-UP OF THE FIRST 300 CARDIAC SURGICAL PATIENTS OPERATED AT THE CARDIOTHORACIC UNIT AT ST. LUKE'S HOSPITAL, MALTA

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Three years ago we presented the short term results of the 300 patients operated in the first year of operation of the Cardiothoracic Unit at St. Luke's Hospital. We would now like to present the medium term follow-up at a minimum of three years following their surgery.

Follow-up was carried out by telephone interview or by case-notes assessment. Data was collected analysing readmission for cardiac related causes, recurrence of chest pain or shortness of breath, return of activity to normal expected for age and current medical treatment. Information was also collected regarding reinvestigation by angiography as well as re-intervention by angioplasty or repeat cardiac surgery.

CVS 07 (R230)

A RETROSPECTIVE STUDY OF PATIENTS WHO WERE REFERRED FOR CORONARY BYPASS ASSESSMENT AND DID NOT UNDERGO SURGERY.

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Objective: Following coronary angiography, patients are assigned by the cardiologist into angioplasty, assessment for cardiac surgery or medical treatment. The surgical group are added to the waiting list. Some patients die on this list, others refuse assessment while a third group are examined by the cardiac surgical team and a decision taken regarding surgery. The aim of the study was to determine the outcome of those patients who did not undergo surgery following referral. During 1995 to 1996 this group amounted to 99 patients, whilst 525 patients underwent coronary revascularisation.

Methods: Case notes of these patients were reviewed retrospectively. Deaths on the waiting list were recorded. Each patient was then interviewed over the phone using a questionnaire. This included an assessment of angina and shortness of breath using the New York Heart Classification (NYHC). An objective assessment of physical and psychological well being was performed based on modified Quality of Life criteria. The patient's satisfaction with medical treatment was also recorded.

Results: 16 patients died on the waiting list. 29 patients refused surgery. 54 patients were advised against surgery for the following reasons: high risk asymptomatic (10), unfit for surgery (30), surgical treatment considered of poor benefit (14). After a mean follow-up of three years 7 patients died. Of those interviewed 12% had significant angina (modified NYHC 3 and 4) and 2% had significant shortness of breath (NYHC 3 and 4). 10% scored poorly for physical and psychological status and 5% expressed dissatisfaction with their medical treatment. 3 patients who originally refused surgery eventually came to coronary bypass.

Conclusion: Our findings highlight an important group of patients dying on the waiting list prior to assessment. Conversely, patients not undergoing coronary revascularisation following assessment have an acceptable mortality and morbidity if managed properly.

CVS 08 (R026)

CIRCADIAN VARIATION IN THE ONSET OF ACUTE PULMONARY OEDEMA AND ASSOCIATED MYOCARDIAL INFARCTION IN DIABETIC AND NON-DIABETIC PATIENTS

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The aim of the study was to investigate the circadian rhythm of acute pulmonary oedema (APE) and the circadian variation in the frequency of associated acute myocardial infarction in diabetic and non-diabetic patients. Consecutive patients admitted to St. Luke's Hospital, Malta with APE over an 18 month period were entered into the study. One hundred and seventy-seven patients were admitted with APE during the study period; 84 of these were diabetic. The 3-month mortality in the diabetic group was 14.1% (95% confidence intervals, CI =6.4-21.8) compared to 2.3% (0.0-5.5) in non-diabetics (p=0.0056). There was a significant circadian variation in the onset of APE in non-diabetic patients ($\chi^2 = 9.4$, p<0.03), but not in diabetic patients ($\chi^2 = 0.34$, NS). Thirty-three (39%) diabetic and 32 (36%) non-diabetic patients (NS) had an AMI. The incidence of AMI in non-diabetic patients presenting with APE during the first quarter (0.0-6.00am) was significantly lower than that during the remainder of the day (21% v 43%, p<0.04).

There was no significant circadian difference in the incidence of AMI in diabetic patients. In conclusion, the circadian rhythm of APE seen in non-diabetic patients is blunted in diabetic patients; non-diabetic patients with onset of APE during the first quarter have a low incidence of AMI. Furthermore, APE has a higher mortality in diabetic patients in spite of a similar incidence of AMI.

CVS 09 (R074)

CONN'S SYNDROME - A TREATABLE CAUSE OF HYPERTENSION

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Introduction: Conn's syndrome (CS) is found in 0.5% of unselected patients with hypertension (HBP). Regardless of its rarity, CS is a fascinating disease - protean in its manifestations, logical in its pathophysiology and straight forward in its diagnosis and treatment.

Aim: To present a personal series of 5 cases of CS (primary hyperaldosteronism) due to adenoma

| Results: Patient/Sex | 1/F | 2/F | 3/M | 4/F | 5/M |
|---|-------------------------------------|----------------------------------|-----------------------|-------------------------------|--------------------------------|
| <i>Age at Δ (yrs)</i> | 45 | 39 | 47 | 49 | 51 |
| <i>Duration of HBP (yrs)</i> | 13 | 14 | 14 | 12 | 1 |
| <i>Symptoms</i> | Myalgia | headaches | none | HBP, preop | None |
| <i>Anti-HBP Medicines</i> | Amlodipine Atenolol Aldactone | atenolol burinex enalapril | atenolol moduretic | atenolol BFZ apresoline | Lisinopril Amlodipine |
| <i>Serum K⁺ (mmol/l)</i> | 2.4-3.1 | 2.8-3.9 | 2.4-2.5 | 2.3-3.0 | 3.4 |
| <i>Plasma Renin (uU/ml)</i> | NA | 8.7 | 123 | 6 | 9.0 |
| <i>Aldosterone (nv: 100-450 pmol/l)</i> | 890 | 740 | 520 | 34 (ng/dl) | 1180 |
| <i>CT scan adrenals</i> | 2 cm right | 1 cm left | 2 cm left | 2 cm left | 5 mm right |
| <i>Other tests</i> | | posture-study vein sampling | | | posture-study vein sampling |
| <i>Treatment</i> | Open Adrenalectomy | Laparoscopic adrenalectomy | awaiting surgery | medical | Medical |
| <i>Present HBP state</i> | off medicines | amlodipine 5 | amlodipine 5 | Aldactone | Amiloride |

Conclusion: HBP patients with spontaneous or diuretic-provoked hypokalaemia should be screened with a plasma Aldo: renin ratio obtained while the patient is off anti-hypertensive drugs (calcium or alpha blockers allowed) for 6 weeks. Differentiating between adrenal adenoma and bilateral hyperplasia is important as therapy is surgical or medical (spironolactone) respectively.

CVS 10 (R012)

CURRENT ISSUES IN THE DIAGNOSIS AND TREATMENT OF VENOUS THROMBOEMBOLISM

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Deep vein thrombosis (DVT) and pulmonary embolism (PE) should be considered as one disease process. As early as 1856 Virchow recognised three major risk factors for venous thromboembolism (VTE): stasis, damage to the endothelium and changes in the coagulation factors. The distinction between VTE associated with temporary risk factors eg surgery and 'idiopathic' VTE is important for prognosis and long-term management. Congenital and acquired thrombophilia including activated Protein C resistance, factor V Leiden and anti-phospholipid antibodies are increasingly recognised causes of

idiopathic VTE.

Non-invasive diagnostic tools are as accurate and safe as contrast venography for the management of patients with clinically suspected DVT. These include impedance plethysmography, compression ultrasonography and D-dimer ELISA. Spiral CT-scanning and magnetic resonance imaging supplement pulmonary angiography and perfusion lung scanning in the diagnosis of PE, whilst transthoracic echocardiography may identify a cohort of patients who would benefit from thrombolytic therapy or surgical/suction embolectomy.

Low molecular weight heparins have been shown in clinical trials to be at least as safe and effective as conventional unfractionated heparin in the treatment of VTE. Once daily subcutaneous dosage and unnecessary laboratory monitoring of the APTT render LMWHs an attractive alternative in the treatment of patients with VTE. Early out-of-hospital management is now a feasible option with no negative impact on patients' quality of life. Use of LMWHs is also being explored for the prophylaxis and management of VTE in pregnancy.

Two other anticoagulants, Hirudin and the heparinoid Danaparoid are important adjunctive treatment options in the management of VTE especially for patients with heparin induced thrombocytopenia type II.

CVS 11 (R228)

PROSPECTS IN THE TREATMENT OF DVT

V. Serafimov, M. Calleja, K. Saliba. Radiology Department, St. Luke's University Hospital, G'Mangia, Malta

Deep venous thrombosis (DVT) is a major cause of morbidity and mortality in the medical practice. Complications include pulmonary embolism (PE), chronic postphlebotic syndrome, phlegmasia cerulea dolens, phlegmasia alba dolens, upper extremity venous insufficiency, and amputation. Of these complications, postphlebotic syndrome is the most common cause of long-term morbidity and disability. Markel et al evaluated the deep venous system with duplex scanning and found the incidence of postthrombotic valvular incompetence was 69% at one year. Pulmonary embolism is believed to be the single most common cause of preventable hospital mortality. Unlike most vascular diseases, which affect the aged almost exclusively, acute DVT and PE frequently occur in healthy young adults.

The management of DVT and its complications remain controversial. The goal of therapy is to eliminate the thrombus, minimize the risk of PE, preserve valvular function, and prevent postphlebotic syndrome. Surgical venous thrombectomy for DVT was introduced in the 1960s and 1970s, but the high incidence of reocclusion, postphlebotic syndrome, and procedural morbidity and mortality limited its acceptance.

The most widely used treatment regimen for DVT systemic heparin and oral warfarin sodium have demonstrated only marginal results in terms of satisfactory vein recanalization and avoidance of chronic venous insufficiency.

Initial attempts at treatment of DVT with thrombolytic agents used streptokinase. The success of streptokinase has been limited by the frequency of incomplete clot lysis, bleeding complications, and the development of antibodies to the drug.

Catheter-directed thrombolysis in the venous system was first used effectively in the management of axillosubclavian vein thrombosis. Catheter-directed infusion of thrombolytic agents into lower-extremity acute DVT was recently reported by Semba and Dake. In this study, 21 patients were treated with regional infusion of urokinase; complete lysis of DVT was achieved in 70%.

HAW 01 (R030)

AN ACCOUNT OF THE EFFECTS OF SOLVENTS AND EXPOSURE TO THESE IN MALTA

A. Schembri, *Occupational Health and Safety Unit, Department of Labour, Valletta, Malta*

The presentation proposes to give an updated view of the principal multisystem effects of chronic exposure to commercially available, and utilised, Organic HydroCarbons, which occur even at low levels of exposure, as used in light to medium Industry, and in the home/for leisure/in the garden as pesticides/in roadworks as tar and pitch. A study is presented which assesses the degree of exposure to solvents and other hydrocarbons, across the Maltese population, based on the premise that such exposure might be widespread.

Results: 7% of the study population, of 3,000 postal addressees, faces an exposure which is of an industrial level; 6.6% were regularly exposed; 50% suffered trivial exposure, while 10% reported no exposure. These figures, together with others to be presented, show up a high degree of exposure, and beyond low level, throughout the population.

Recommendations: To create public awareness of the problem, the issue of guidelines for statutory control, and to propose future legislation.

HAW 02 (R168)

WORK & HEALTH: TRAUMATIC OCCUPATIONAL FATALITIES IN MALTA

Noel Vella, *Mark Gauci*, *Occupational Health & Safety Unit, Department of Labour, Valletta, Malta*

Work-related fatalities in Malta were analysed for the period 1988-1994. Multiple data sources which included death certificates, autopsy reports, Department of Social Security records, and reports of Magisterial Inquiries were cross-referenced to obtain data on employment status, employing organisations, age groups, type of accidents, causes of death, and type of industry. Workers compensation records identified 20 cases whilst Department of Labour records identified 47 cases for this period. Falls from heights, being struck by falling objects and crush injuries were the commonest types of accidents. There were 2 multiple fatality events accounting for 6 deaths. Major causes of death were skull fractures, multiple injuries and hypovolaemic shock. Post-mortem toxicological screening for alcohol or drugs proved negative in almost all cases tested.

Improved surveillance of occupational accidents in general and of fatal occupational occurrences is required. This can be achieved by changes in existing reporting mechanisms so that all relevant data sources i.e., Dept of Labour, Department of Social Security, death certificates, Police Department and Attorney General's Office are included and collated.

HAW 03 (R120)

HEALTH AND WORK: NOISE INDUCED HEARING LOSS

N.H. Vincenti, *E.N.T. Department, St. Luke's Hospital, G'Mangia, Malta*

Noise is a major hazard in many industries and in the armed forces. The objective of this paper is to describe the nature of the hazard. In many countries, legislation exists for the protection of those at risk. The United Kingdom Armed Forces implemented one of the earliest hearing conservation programmes. The author draws on his personal experience of cases of noise induced hearing loss. Hearing protection is a fast developing field and the author outlines the recent advances in the use of chemicals to minimise noise induced hearing loss.

HAW 04 (R062)

HEALTH AND WORK: SHORT TERM SICKNESS ABSENCE

Franco Grima, 45 Castro Street, Naxxar, NXR 03, Malta

Short term absence attributed to sickness is a major problem for human resource management. In view of the costs involved and the adverse effect upon the whole organisation, the effective management of this problem is of the highest priority.

The objective of this paper is to discuss the problem faced by management and to show how the right approach should help reduce the causes of short term sickness absence.

There are various ways of controlling sickness absence. The author outlines an overall policy for its successful management.

PAT I 01 (R217)

GENOTYPICAL AND PHENOTYPICAL CHARACTERISATION OF THALASSAEMIA INTERMEDIA AND MAJOR IN MALTA

C.A. Scerri^{1,3}, **S. Bezzina Wettinger**^{1,3}, **S. Buhagiar**³, **A. Grochowska**^{2,3}, **M. Marwan**¹, **M. Pizzuto**¹, **S. Pulis**¹, **G. Sammut**¹, **A.E. Felice**^{1,2}. ¹Laboratory of Molecular Genetics, University of Malta, Malta; ² Department of Pathology, University of Malta, Malta;

³ Department of Health, Malta

Data on the molecular defects leading to β -thalassaemia were obtained from 28 homozygotes out of the known 29 subjects. Four different mutations were encountered, with the β^+ IVSI-6(T \rightarrow C) accounting for 71.4% of all β -thal alleles [β^+ IVSI-110(G \rightarrow A) = 12.5%; β^0 IVSII-1(G \rightarrow A) = 10.7%; β^0 Codon 39(C \rightarrow T) = 5.4%]. The β^+ IVSI-6(C) allele was present on both haplotype VI and VII while the β^0 Codon 39(T) and the β^+ IVSI-110(A) were associated with haplotypes I and IX respectively. The β^0 IVSII-1(A) mutation was found within haplotype II except in one case that had an unusual VI/II hybrid haplotype. The VI/II hybrid haplotype was characterised by a low HbF (7.7%) in contrast to the other 5 cases that had a high HbF (~60%). Data collected prospectively on the β^+ IVSI-6C homozygote children, indicated that the disease presented as a moderate to severe condition needing regular blood transfusions (mean = 70ml/kg/year) for normal growth and development. Splenectomy had little effect on the blood transfusion requirement of the β^+ IVSI-6C homozygotes. On the other hand, the adult β^+ IVSI-6C homozygous condition was characterised by a mild disease (mean Hb= 8.2g/dl) with only occasional transfusions. Intra-allelic heterogeneity in the level of HbF was observed among the β^+ IVSI-6C homozygotes and these could be divided into two groups, one with a relatively high HbF (mean=15.0%) and one with a low HbF (4.5%). Statistically significant ($p<0.05$) gender difference in the level of HbF was also observed with female patients having in general, a higher HbF level.

PAT I 02 (R046)

THE FRAGILE X SYNDROME IN A SELECTED POPULATION OF MENTALLY RETARDED INDIVIDUALS

E. Said, **A. Cuschieri**, Department of Anatomy, University of Malta

Fragile X syndrome is the most common heritable cause of mental retardation with a prevalence of 1 in 4000 males. Individuals effected present with mental retardation or learning disabilities and typically have a long face, prominent jaw and in post-pubertal males, enlarged testis. The syndrome segregates as an X-linked dominant disorder with reduced penetrance. Either sex when carrying the mutation may exhibit mental deficiency. The syndrome has been associated

with an expansion mutation involving CGG repeats in the FMR1 gene situated at Xq 27.3. Normal individuals have 6-45 CGG repeats, carriers have 56-200 triplets (premutation) and effected individuals have more than 200 CGG triplets (full mutation).

Alleles with 46-55 repeats are in the grey zone and the risk of expansion has not been clearly defined. The premutation may be transmitted through both males and females. This study presents a local screening programme on a selected population of mentally retarded individuals.

Aims: To identify and characterise children with familial mental retardation in special schools for the mentally retarded.

Materials and Methods: In this study mentally retarded children and adolescents from three special schools were screened. DNA obtained from buccal cells was analysed using the polymerase chain reaction to amplify the CGG region and assess its size. Parental consent was obtained from seventy mentally retarded individuals and these were screened.

Results: Two boys (maternal first cousins) had a methylated full mutation; one girl was a premutation carrier; three boys and one girl had alleles in the grey zone. Family history in all these cases was negative. Two further boys from normal schools tested because of a family history of familial mental retardation were mosaics for a premutation and a full mutation.

PAT I 03 (R095)

ETHICAL ASPECTS OF COUNSELLING FAMILIES WITH FAMILIAL MENTAL RETARDATION

Alfred Cuschieri¹, Edith Said¹ *¹Department of Anatomy, University of Malta, Msida, Malta*

Familial mental retardation is an X-linked recessive syndrome caused by a trinucleotide repeat expansion and may manifest the phenomena of pre-mutation and mosaicism.

The finding of X-linked mental retardation in a child has serious implications for the normal members of the family who might be carriers of this condition. Often the parents are not aware of the familial nature of the condition because of the apparent absence of a family history. The mother may be reluctant to convey the message that the condition affecting her child runs in the family and that half of her unsuspecting relatives are likely to be carriers. Does the doctor who is aware of the condition carry a responsibility of notifying relatives that they could be at risk or would this be an infringement on confidentiality?

Genetic counsellors should have due regard to the fathers' attitude when he discovers that the mother was solely responsible for transmitting the disease to his child. There are several implications in counselling young relatives who are planning to get married or of young couples who are already married. If gene testing proves them to be carriers, should they be counselled about pre-natal diagnosis and possible termination of pregnancy which carries its own inherent ethical problems? Should normal male relatives be alerted to the possibility that they could be pre-mutation carriers? Male pre-mutation carriers do not present a risk of their children being affected but may transmit to them an expanding mutant gene, which may show up in their grandchildren. What type of counselling should be given to safeguard future generations?

The implications of being a gene carrier for FMR also extend to medical and life insurance policies. Is it right that carriers of X-linked genetic diseases be refused insurance or requested to pay increased premiums? What genetic information should be passed on to insurance companies? These ethical issues will be discussed critically.

PAT I 04 (R259)

PATHOLOGICAL THOUGHTS ON THE APPARENTLY DIAMETRICALLY OPPOSED EMERGING PHILOSOPHIES IN BREAST AND PROSTATE CANCER THERAPIES, AND ON THE POSSIBLY PREVENTIVE ROLE OF MICRONUTRIENTS

Albert Cilia-Vincenti, *Department of Pathology, St. Luke's Hospital, G'Mangia, Malta*

The concept that breast cancer primarily kills by blood-borne spread lead to the introduction of adjuvant chemotherapy, and to conservative less mutilating surgery. A newer concept is chemotherapy before surgery for most, if not all, breast cancer patients. The emerging philosophy in prostatic cancer management favours radical prostatectomy for presumed stage 1 disease. This reasoning was discredited in breast cancer management almost two decades ago. Will radical prostatectomy follow in the footsteps of the Halsted radical mastectomy? It may take some time yet for urologists to learn what breast surgeons now accept, namely that mortality and survival are largely dependent on tumour biology rather than the extent of mutilating surgery. Breast and prostate cancer are both, to some extent, hormonally driven and also have similar geographic differences in incidence, being much commoner in Western than in Asian countries. Weak plant oestrogens in Asian diets may explain this and present one avenue of possible preventive measure worth investigating:

SUR I 01 (R262)

RECENT ADVANCES IN SURGICAL ONCOLOGY

Irwin Taylor (*Abstract not available at time of going to press*)

SUR I 02 (R050)

WIRE-GUIDED LOCALISATION BREAST BIOPSY. LOCAL OUTCOMES EVALUATION OVER A 20-MONTH PERIOD

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Wire-Guided Localisation Breast Biopsy is the procedure used to establish the histological nature of non-palpable breast lesions detected mammographically.

The objectives of our study are:

To establish the Positive Predictive Value (PPV - % malignancies detected) of wire-guided localisations held locally

Literature review with which to compare our results

To re-assess the demographic, clinical and radiological findings leading to biopsy

To establish selection criteria to avoid unnecessary intervention

66 biopsy procedures in all of 61 consecutive patients referred for wire-guided localisation during the period between Jan 1997 and Aug 1998 were studied retrospectively. These patients were referred to SOP with breast symptoms (52%), for follow-up of previous breast condition (20%) or following HRT (12%), as check-up (12%) or for other reasons (strong family history, h/o Ca Ovary - 4%). Half of these women these women were below 50 years of age.

The PPV of malignancies detected was of 19%; the nature of these malignancies and clinical features of patients in whom they were found are discussed. Our results were then compared with those obtained from a Literature Review on the topic.

In conclusion, we suggest ways of improving local yield and avoiding unnecessary intervention, possibly by the introduction of Selection Criteria based on initial and follow-up mammographic findings.

SUR I 03 (R125)

BREAST CANCER AND LOOKING GOOD

Gordon Caruana-Dingli¹, Dalmas M². *¹Department of Surgery, St. Luke's Hospital, G'mangia, Malta; ²Malta National Cancer Registry, Department of Health Information, Malta*

Surgery for breast cancer has changed dramatically from the times when radical mastectomies were performed. Breast conservation with radiotherapy is as effective as mastectomy for small tumours.

New cases of breast cancer presenting between 1996 and 1998 were investigated by review of cancer registration forms, case notes, histology reports and operating theatre records. The stage at presentation is shown and local figures are compared to those from other countries. The extent of surgery and adjuvant therapy is correlated with the stage of the disease at presentation.

Mastectomy and even breast conservation may produce poor cosmetic results. Reconstructive techniques practised in Malta are illustrated.

SUR I 04 (R139)

A REVIEW OF 164 PATIENTS AFTER BREAST AUGMENTATION

Charles Swain, A. Swain. *University of Malta, Medical School, G'Mangia, Malta*

The study reviews 178 surgical procedures in 164 patients who have undergone augmentation with mammary implants. Mean follow-up was 7.8 (range 0.5-20.0 years). The implants used reflect the evolution, over the past twenty years, of these devices in cosmetic breast augmentation, breast equalisation procedures and volume replacement after bilateral subcutaneous mastectomy. The standard procedure was submammary placement (133/178) of the implants through an inframmary incision (166/178) although periareolar and axillary incisions and subpectoral pockets were used when indicated. Twelve patients (7.3%) required revision surgery for capsular contracture, suspected implant rupture or asymmetry. Two patients opted to have their implants changed to a bigger size.

After implantation five women underwent breast biopsy for a palpable lesion, none of which was malignant. The results indicate that augmentation with mammary implants is a safe procedure although revision surgery may be required for local complications such as rupture and capsular contracture.

SUR I 05 (R118)

HEPATITIS B IMMUNIZATION: A SURVEY OF SURGEONS AND THEATRE NURSES

C.H. Jones, G. Caruana-Dingli, M.A. Borg and C. Swain, *Department of Surgery St Lukes Hospital Malta*

Acute viral hepatitis remains a serious condition. Its long term sequelae include cirrhosis and hepatocellular carcinoma. Health workers constitute a high risk group for contracting hepatitis B. Therefore, a group of clinicians associated with invasive procedures and nurses working in operating theatres were invited to answer a confidential questionnaire concerning hepatitis B immunization and the use of protective measures.

A self-administered confidential questionnaire was sent to 152 clinicians and 97 theatre nurses, of whom 82 and 74 respectively responded, giving an overall response of 63 %. Whilst ninety-one per cent of respondents considered their speciality as being of high risk for hepatitis B only sixty-three (63.4%) per cent of them were fully immunized and of these only fifty per cent (50.5%) had had their immunity tested. Out of those who checked their antibody status nineteen per cent (19%) did so following a needlestick injury. Sixty per cent (60%) of our respondents had had a needlestick injury over the past year. Even so barrier precaution techniques were used infrequently with only seventeen per cent (17%) always or at least frequently using double-gloving and nine per cent (9.7%) wearing a visor during operations. Some respondents also commented on the poor availability of resources such as impermeable gowns or blunt needles which are established precautions against contamination from hepatitis B.

SUR I 06 (R272)

ANTIBIOTIC PROPHYLAXIS IN SURGERY

F. Felice (*Abstract not available at time of going to press*)

SUR I 07 (R233)

MICROSURGERY IN MALTA

F.X. Darmanin. *Plastic Surgery, Department of Surgery, St. Luke's Hospital, G'Mangia, Malta.*

One of the most challenging developments in reconstructive surgery in the last 35 years has been microsurgery of small vessels and nerves. Each year new clinical fields have appeared with techniques ranging from re-vascularization and re-implantation of digits or limbs, microvascular free flaps which may include muscles and bones, and the free transfer of digits from one limb to another. The modern operating microscope, with its refined optics and improved magnification, enables a surgeon to achieve goals not possible with conventional techniques. The skills of the surgeon are augmented by fine instrumentation and microsutures which, not only minimise trauma to small structures but, enable these to be repaired with a precision not previously possible. In Malta, the operating microscope has already been in use for a number of years, mainly in Ophthalmic and ENT surgery, and occasionally in neurosurgical procedures. New microsurgical techniques have been recently introduced in Malta, namely for digit re-implantation, free tissue transfer, and microneural anastomosis and grafting. Several examples are shown here to illustrate microvascular and microneural techniques as applied to free tissue transfer for reconstruction in head and neck cancer, and upper limb injury.

SUR I 08 (R019)

LAPAROSCOPIC ADRENALECTOMY FOR THE TREATMENT OF ACTH-DEPENDENT CUSHING'S SYNDROME

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Background: Bilateral adrenalectomy is indicated for the treatment of ACTH-dependent Cushing's syndrome when the tumorous source of ACTH hypersecretion cannot be identified or removed. Laparoscopic adrenalectomy has been advocated as the intervention of choice in these patients. Potential advantages of laparoscopic over open adrenalectomy include decreased length of hospital stay, a decreased requirement for post-operative analgesia and decreased post-operative morbidity secondary to incisional complications.

Methods: Bilateral laparoscopic adrenalectomy performed for the treatment of ACTH-dependent Cushing's syndrome was attempted in fifteen patients at our institution between 1995 and 1998. Conversion to an open procedure was required in three patients. All patients who underwent laparoscopic adrenalectomy were subsequently followed to assess the outcome of this intervention.

Results: Four patients with ectopic ACTH syndrome and eight patients with pituitary-dependent Cushing's disease underwent successful bilateral laparoscopic adrenalectomy. All experienced resolution of proximal myopathy, hirsutism and emotional lability. This was accompanied by weight loss and improved glucose tolerance and blood pressure control. No residual cortisol secretion was detected in our patients.

Conclusion: Bilateral laparoscopic adrenalectomy is a safe and effective therapy for ACTH-dependent Cushing's syndrome

SUR I 09 (R163)

INTRA-ORAL SALIVARY GLAND TUMOURS: A CLINICO-PATHOLOGIC STUDY

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A clinico-pathologic investigation of intra-oral salivary gland tumours to study incidence, management and prognosis of various tumour types. The records of the Pathology Department, Dental Surgery Department, St. Luk's Hospital and private Pathology Laboratories were examined to collect details of all intra-oral salivary gland tumours. All available microscope slides were reviewed by JD. Freshly cut and stained slides were prepared when necessary and histochemical staining was utilised. The tumours were classified according to the WHO Classification (Seifert G (Ed). *Histological typing of salivary gland tumours*. 3rd ed. Berlin 1991).

Sixty-two (62) tumours (26 Males, 36 Females) satisfied the criteria for inclusion for the period 1955-1998. The age incidence at diagnosis ranged from 9 to 80 yr, the highest was 16 (25%) at 60-69 yrs followed by 13 (21%) patients in the 30-39 years age group. Incidence per decade shows a steady increase with 90-98 decade being highest with 22 patients. Site involvement was palate 38 (61%), cheek 13 (21%), lips 9 (15%) and other sites 2 (3%). There were 46 benign lesion (Pleomorphic adenoma: monomorphic adenoma) and 16 malignant lesions (mucoepidermoid carcinoma, adenoid cystic carcinoma, polymorphous low-grade carcinoma and acinic cell carcinoma). The ratio between benign and malignant lesions was 46:16. The commonest type was the pleomorphic adenoma with 44 cases (M 21, F 23) with 24 (55%) in the palate, 12 (27%) buccal and 8 (18%) in the lips. There was one case of multiple pleomorphic adenomas (in the lip and palate).

All benign lesions were treated surgically, mostly by simple enucleation or excision. There were no cases of recurrence in benign lesions of the movable soft tissues. Most malignant lesions occurred in the palate (all 3 mucoepidermoid carcinomas, and 4 out of 5 adenocystic carcinoma and 3 out of low grade polymorphous carcinoma).

There was one malignant lesion each in the lip and the cheek whilst one third of palatal lesions were malignant.

SUR I 10 (R001)

OSSEOINTEGRATED IMPLANTS: AN INTRODUCTION TO THE SCIENCE AND CLINICAL APPLICATION

Mark S. Diacono. *'Castelnaud', 28a St. Mary's Street, Naxxar, Malta*

Osseointegration is defined as 'a direct structural and functional connection between ordered, living bone and the surface of a load carrying implant'.¹ Over the last two decades there has been intensive research on commercially pure titanium implants used to support dental prostheses. From this successful work, new developments have led to the use of titanium implants in other areas of the body. Today, implants are used to support craniofacial prostheses, limbs, hearing aids as well as replacing joints and anchoring distraction osseogenesis devices.

This presentation covers the basic science of osseointegration as well as case presentations of the author's own work on implant supported craniofacial prosthesis.

¹ Branemark P-I. Introduction to osseointegration

In: *Tissue-Integrated Prostheses. Osseointegration in Clinical Dentistry.*

Chicago: Quintessence Publ Co; 1985:chap 1

SUR II 01 (R126)

HORMONAL MANAGEMENT OF CARCINOMA PROSTATE: INNOVATIONS AND CONTROVERSIES

Carmel L. Cutajar. *Department of Urology, St. Luke's Hospital, G'Mangia, Malta*

Since the introduction of hormonal therapy by Huggins & Hodges in 1941 this has become established treatment for locally advanced and metastatic NG prostate. However, its role in early (localized) cancer is controversial and hormonal escape is a problem. Many aspects of hormonal therapy have become (or should become) the subject of many trials. On the basis of our own experience within the EORTC Group the following aspects will be discussed:

- a) Role of hormone therapy in the advanced or metastasised cancer prostate
- b) Monotherapy vs maximal androgen blockade
- c) Early vs delayed hormone therapy
- d) Intermittent hormone therapy
- e) The anti-androgen withdrawal syndrome
- f) Hormone therapy in the early (localized) case. Adjuvant or/and neoadjuvant therapy

SUR II 02 (R113)

INDIRECT COMPUTED TOMOGRAPHIC LYMPHOGRAPHY WITH IMAGENT® LN (PERFLUBRON) FOR ASSESSING LYMPH NODES DRAINING THE PROSTATE

Pierre Vassallo, Kristen L. Meyer, Cornelia Matei. *Memorial Sloan Kettering Cancer Center, New York, New York, USA.*

Purpose: To evaluate intraprostatically-injected *Imagent LN* as a contrast agent for retroperitoneal/pelvic computed tomographic (CT) lymphography, and to map its intranodal distribution with combined high-resolution ¹⁹F/¹H MR imaging.

Materials and methods: *Imagent LN* (dose:1.0mL) was injected under CT guidance into the prostates of 6 adult cynomolgus monkeys. CT was performed immediately following and 2, 5, 7, 9, 14 and 21 days post-contrast injection. Intranodal concentration of *Imagent LN* was estimated through correlation of node and phantom density measurements. Subsequently, retroperitoneal/pelvic node dissections were performed. Nodes visualized/palpated at dissection

(n=20) were isolated for $^{19}\text{F}/^1\text{H}$ MR imaging. Subsequently all dissected tissues were sent for histologic analysis.

Results: *Imagent LN*-enhanced CT demonstrated 40 (diameter: $7.5\pm 0.2\text{mm}$) but missed 52 nodes (diameter: $1.6\pm 0.1\text{mm}$). Peak nodal enhancement occurred at post-contrast day 13. Ex-vivo $^{19}\text{F}/^1\text{H}$ MR images showed homogeneous enhancement in 12, filling defects in 6 and no enhancement in 2 nodes.

Conclusion: CT-lymphography with intraprostatically-injected *Imagent LN* can opacify pelvic/retroperitoneal nodes, but is limited when node size approaches CT slice thickness. $^{19}\text{F}/^1\text{H}$ MR images demonstrate that non-enhancement or filling defects may occur, which may mimic metastases.

SUR II 03 (R089)

EXTRACOPORAL SHOCK WAVE LITHOTRIPSY IN THE MANAGEMENT OF URINARY TRACT CALCULI

Aquilina K, Formosa N, Cutajar CL, Axiaq C. *Department of Urology, St. Luke's Hospital, G'Mangia, Malta*

Extracorporal Shock Wave Lithotripsy (ESWL) was first used at St. Luke's Hospital in January 1998 using a Direx Lithotripter with X-Ray localisation. Since then, 43 patients have been referred by the above firm for this treatment. These patients underwent a total of 61 sessions. A third required more than one session. Half the patients had previously undergone other procedures, most often percutaneous nephrolithotripsy. The patients were followed up by a plain abdominal radiograph taken four weeks after the session. The stone burden has been effectively reduced or eliminated in 35 patients up to the time of writing. Only 2 patients have required further surgery for calculi. Stenting of the ureter was performed in 40% of patients. It can be concluded, from this review, that similar to other urology institutions, ESWL has become firmly established locally in the management of urinary tract calculi.

SUR II 04 (R142)

HOW COMPLETE IS OUR METABOLIC WORK-UP OF RENAL TRACT STONE FORMERS?

R. Calleja, Irving S, Costa M, Burgess N. *Department of Urology, Norfolk and Norwich Hospital NHS Trust, Norwich NR1 3SR, UK*

Aim: To determine how thoroughly patients experiencing a stone episode are assessed for biochemical risk factors.

Materials and Methods: All patients in this study over a two year period had passed a stone. The extent to which the patients were investigated for the known risk factors of hypercalcaemia, low urine volumes, hypercalciuria, hypomagnesiuria, hypocitraturia, hyperoxaluria and cystine spot testing were assessed.

Results: 202 calculi with a 3:1 M:F ratio were assessed over this time period. A complete work-up was obtained in only 31.3% of patients (GP's in 11% and Consultants in 42%). Only 47% had a basic serum calcium assessed; 10% of these (4.3% of the total) were subsequently found to have hypercalcaemia due to hyperparathyroidism. Of all patients with a complete assessment, 81% were found to have at least one abnormality.

Conclusions: Biochemical stone assessment in patients with proven stone disease appears to be performed incompletely if at all in both hospital and general practice. A serum calcium is

essential as part of the work-up of renal tract calculi. Cystinuria has a low pick up rate(0.5%) but is relatively cheaply picked up with a spot test. As a large number of all patients investigated were shown to have at least one abnormality, we would recommend the performance of complete serum and urinary biochemistry to enable earlier diagnosis and management of primarily treatable conditions.

SUR II 05 (R057)

URODYNAMICS SERVICE AT ST. LUKE'S HOSPITAL.

Karl German¹, Chris Fearne². ¹Dept of Urology; ²Paediatric Surgical Unit, St. Luke's Hospital, Malta

In 1998 urodynamics were introduced to St. Luke's Hospital. The first 50 adult and paediatric cases are reviewed and analysed. The indications for performing the investigation are discussed. The impact of the urodynamics service in terms of diagnosis and management are audited.

SUR II 06 (R053)

RATIONALE OF HYPOSPADIAS REPAIR

Chris Fearne, Simon Reginiano. Paediatric Surgical Unit, St. Luke's Hospital, G'Mangia, Malta

The case notes of 29 boys who underwent hypospadias repair between June 1996 and May 1998 were retrospectively analysed. The average age at operation was 3 years, with a range of 1 to 12 years. 15 boys had a Matthieu repair, 6 had an Onlay island flap repair, 3 had a Duckett's tubularized flap repair and 4 had a MAGPI repair. One boy had a megameatus with intact foreskin and underwent a ventral flap repair. 5 boys (17%) had post-operative fistula which was subsequently repaired.

The choice of operative repair is discussed and a brief outline of the various operative techniques is given.

SUR II 07 (R252)

THE EYE IN SYSTEMIC DISEASE

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The eye often reflects the state of health of an individual. In many instances, ocular signs may lead to the diagnosis of a systemic condition, such as an indication of diabetes and hypertension. Early detection and diagnosis is therefore vital to prevent serious visual deficit. Virtually all structures within the eye may be involved in systemic disease, with the cornea complicating inflammatory conditions, such as rheumatoid arthritis. Changes within the orbit and extraocular muscles may reflect activity of the thyroid gland. Optic neuritis is frequently the presenting symptom of disseminating sclerosis. More recently, unexplained changes in the ocular fundus may point to a diagnosis of AIDS.

SUR II 08 (R049)

FIRST RESULTS OF PHACOEMULSIFICATION CATARACT SURGERY CARRIED OUT IN MALTA

Thomas Fenech. Department of Ophthalmology, St. Luke's & St. Philip's Hospitals, Malta

Small incision cataract extraction using phacoemulsification techniques are now widely practiced in the western world, over 90% of all cataract extractions in the United States of America are

carried out by small incision phacoemulsification. The principal advantages of this technique over more conventional methods like extracapsular cataract extraction are i) little postoperative discomfort ii) rapid postoperative recovery iii) reduced risk of postoperative astigmatism iv) more rapid recovery of normal vision v) earlier return to normal activities.

Phacoemulsification was first introduced in Malta by the author in May 1997, the results of a consecutive series of 50 patients operated by this technique using a 3.2mm incision enlarged to 4.1mm for insertion of a foldable 6.00mm acrylic intraocular lens will be presented. In summary, 72% of patients attained an uncorrected visual acuity of 6/9 or better within 10 days of surgery, with over 90% having a best corrected acuity of 6/9 or better at the 6 weeks postoperative visit. The main postoperative complication was a transient rise in intraocular pressure in 7 patients and 2 cases of moderate corneal oedema both of which cleared by the 1 week follow up visit.

SUR II 09 (R023)

PHACOTRABECULECTOMY : RISK FACTORS AND COMPLICATIONS

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Aims: To assess the outcome of combined cataract extraction and trabeculectomy in respect to intraocular pressure (IOP) and visual acuity (VA) whilst identifying any risk factors and per/post-operative complications that are specific for this procedure.

Methods: One hundred and six patients who had undergone combined surgery (phacotrabeculectomy or conventional methods) between June 1995 and May 1996 at Manchester Royal Eye Hospital were analysed. The mean follow-up period was 16.1 months.

Results: 71% of patients who had phacotrabeculectomy had successful drainage compared to 47% who had the conventional combined surgery. 81% of phacotrabeculectomy group and 90% of the conventional group had best corrected visual acuity of 6/12 or better post-operatively. There is a high incidence of fibrinous uveitis with combined surgery.

SUR II 10 R136

ORBITAL RECONSTRUCTION IN THE TREATMENT OF BLOW-OUT FRACTURES

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Due to increasing numbers of blow-out fractures of orbit new methods of orbital wall reconstruction are necessary. Experience with 153 cases of such fractures are described, especially their operative treatment.

For the reconstruction are used lyophilised bone, cartilage grafts, or AO miniplates eventually. Conclusions are discussed with respect to the achieved results and literature sources.

OBG I 01 (R263)

SELECTIVE OESTROGEN RECEPTOR MODULATORS

H. Sallam (abstract not available at time of going to press)

OBG I 02 (R264)

ULTRASOUND DEVELOPMENTS IN OBSTETRICS AND GYNAECOLOGY

S. Campbell (abstract not available at time of going to press)

OBG I 03 (R192)

CAROTID ARTERY WALL THICKNESS IN POSTMENOPAUSAL WOMEN TREATED WITH ORAL OESTROGENS AND OESTRADIOL IMPLANTS

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Objective: To investigate whether the thickness of the layers of the carotid artery (externa, media and intima) are affected by the menopause and its treatment by hormone replacement therapy (HRT).

Methods: Postmenopausal women (129) attending the gynaecological outpatient department at St. Luke's Hospital were recruited sequentially and classified into three groups. Forty-six were taking oral HRT, 32 had oestradiol implants and 51 had never taken HRT. Three layers of the externa wall of the carotid artery were differentiated and measured accurately using a high-resolution 22.5 MHz ultrasonography probe (Osteoson DIII Minhorst, Wiesbaden, Germany).

Results: Postmenopausal women on implants were found to have the thickest carotid artery wall measurements when compared to the other groups. Both the externa and the media were significantly thicker. Both of these layers have a high connective tissue component including collagen Type I, collagen Type III and elastin fibres. The intima layer was statistically significantly thinner in the oral HRT group when compared to the control group. A statistically significant higher intima-media ratio was obtained for the control group when compared to both the oral HRT and implant groups.

Conclusion: This study suggests that HRT given to postmenopausal women significantly influences the three layers of the carotid artery. Moreover this effect appears to be dose dependant. It appears that this hormonally induced influence encourages thickening of the layers with the highest connective tissue component (externa and media) and appears to delay the thickening of the atheromatous intima layer. These effects on the vascular system may be partly responsible for the cardioprotection attributed to hormone replacement therapy.

OBG I 04 (R216)

A COMPARISON OF OSTEOCALCIN LEVELS IN MALTESE AND BRITISH POSTMENOPAUSAL WOMEN

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Osteoporosis is a condition characterised by low bone mineral density (BMD) and increased risk of fracture. Osteocalcin (Oc) is a major non-collagenous protein in bone and is used as a biochemical marker of bone formation. Osteocalcin contains three gamma-glutamyl residues, which are carboxylated to gamma-glutamyl residues in a vitamin K-dependent process. Undercarboxylated osteocalcin (UcOc) has been associated with lowered bone mineral density and increased fracture risk at the hip.

Serum osteocalcin (sOc) levels were measured by radio-immunoassay. Serum undercarboxylated osteocalcin (sUcOc) was measured by a specific enzyme-immunoassay and expressed as a percentage of total sOc. Bone mineral density was measured at the lumbar spine (LSBMD) and at the femoral neck (FNBMD) by Dual Energy X-Ray Absorptiometry (DXA).

A cohort of 66 women from Malta and 102 women from Britain were recruited for this study. None of these women were taking any medication known to affect bone metabolism, including hormone replacement therapy.

Using the Student's T-Test we have demonstrated that there was no significant difference between the Maltese and British sOc (P=0.5 NS) or % sUcOc levels (p=0.31 NS). In addition, in a linear regression there was no significant relationship between sOC and FNBMD (r=0.02, p=0.9 NS) or LSBMD (r=0.01, p=0.6 NS) and no significant relationship between sUcOc and FNBMD (r=0.09, p=0.6 NS) or LSBMD (r=0.06, p=0.7 NS).

These findings contrast with those of Szulc (1994) and Vergnaud (1997) who demonstrated a significant relationship between sUcOc, hip bone mineral density and the risk of hip fracture.

This work is part of an ongoing programme of research investigating the role of vitamin K and lipid metabolism in the pathogenesis of osteoporosis.

OBG I 05 (R178)

THE EFFECT OF AN EXTRACT OF A PHYEOPHCAC ALGA (EPP) ON HUMAN BREAST CARCINOMA CELLS RELATED TO TAMOXIFEN AND OESTRADIOL

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Introduction: Clinical studies are under way investigating the potential of a group of Terpenoids present in a marine algae extract in the prevention and treatment of postmenopausal osteoporosis. Studies undertaken have shown that a purified extract of a pheophycac alga (EPP) increases the uptake and fixation of calcium in cultured cells including osteoblasts even in the presence of a calcium fixation inhibitor (interlurin 1) (Patent). For further investigation of the potential of EPP, cytotoxicity tests were carried out on breast carcinoma cells and fibroblasts and compared to the effect of Tamoxifen and Oestradiol.

Material and Methods: Breast carcinoma cells derived from surgical material and human melanoid carcinoma cells ZR-75-30 (ATCC CRL 1504) were cultured in the presence of, EPP, Tamoxifen and Oestradiol respectively at various concentrations. The same study was carried out using human fibroblasts FPH from primary cultures and mouse fibroblasts L020, CACC85011425. Cell viability under the various conditions was determined by observing morphological and biochemical features. Concentrations used were in the range of 50ng/ml to 200ng/ml EPP, in culture medium, 10⁻³M to 10⁻¹²M for Tamoxifen and 10⁻³M to 10⁻¹²M for Oestradiol. These were felt to be equivalent ranges and encompassed a possible therapeutic range.

Results: Breast carcinoma cells exposed to concentrations of around 75ng/ml to 200ng/ml with different concentrations of EPP showed inhibited growth with cell death which occurring within 3 to 4 days in the higher concentrations. Fibroblasts appeared not to be affected when exposed to these concentrations of EPP. Exposure of the fibroblasts and the carcinoma cells to Tamoxifen or Oestradiol, depending on the concentration used, resulted either in rapid cell death within 24 hours or in no visible effect. No particular selectivity to Breast cancer cells was demonstrated using Tamoxifen or Oestradiol.

Conclusion: This study confirms that both Tamoxifen and Oestradiol are cytotoxic to breast cancer cells at their therapeutic range. However no particular selectivity to Breast cancer cells was shown. EPP was selectively cytotoxic to breast carcinoma cells while the fibroblasts were not effected. The same range of EPP concentration used was also responsible for calcium uptake and fixation observed in osteoblasts. EPP has the potential of being useful in the management of postmenopausal bone loss, and is potentially a substitute to either oestrogens or Tamoxifen. Further investigations are under way.

OBG I 06 (R191)

BONE DENSITY AND SKIN THICKNESS CHANGES IN POSTMENOPAUSAL WOMEN ON LONG TERM CORTICOSTEROID THERAPY

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Introduction: Long term 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.

Patients and methods: A cross-sectional study was performed on 164 postmenopausal women who had been on long term corticosteroid therapy. A longitudinal study on 38 postmenopausal women on long term steroid therapy was performed. Each woman had the skin thickness measured by high resolution ultrasound (22MHz) and the bone density measured by a DEXA-Norland 386.

Results: The cross-sectional study showed that steroid therapy was associated with the thinnest skin measurements (0.83mm) obtained for all patients screened at the menopause clinic. Similarly low bone density measurement, lumbar spine (0.81g/cm)², hip (0.71g/cm)² were obtained for patients on long term standing therapy. Twelve women had sustained single or multiple fractures.

Since the establishment of the bone density unit 38 patients who had been on long term steroid have been followed up after the administration of oral hormone replacement therapy [Prempak C 0.625 mg]. This longitudinal study revealed a constant increase in skin thickness [6% per year] and bone density [left hip 5%, Lumbar spine 4%].

OBG I 07 (R190)

ESTABLISHMENT OF THE STILLBIRTH AND NEONATAL DEATH SOCIETY (SANDS, MALTA)

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The Stillbirth and Neonatal Death Society (SANDS) was established in the Maltese Islands in June 1994. The members of this society offer support to parents who have sustained a stillbirth or neonatal death. Also included are parents who have suffered a late miscarriage from 16 weeks gestation onwards. SANDS is composed of a number of professionals from various disciplines such as obstetrics, midwifery, psychology and social work. The support offered by SANDS can be broadly divided into two categories: hospital and community based support. During the mother's hospitalisation, newly bereaved parents are supported at both emotional and pragmatic levels by the midwifery and obstetric personnel. Community support group sessions are

organised in a semi-structured manner, not only allowing for catharsis of the bereaved parents but these sessions are also task-oriented. Both these characteristics encourage progress through the grieving process with the hopeful outcome of reinvesting in life. The community-based support sessions also include a medical (obstetric) input. The medical contribution reviews the antenatal, intrapartum and neonatal events. At no time is blame apportioned to any individual, patient or system of work. On the contrary, the advances and limitations of modern obstetric science are explained in a realistic perspective, made comprehensible to the layman. The objective of this exercise is to re-install confidence in the bereaved parents themselves and the Maltese medical services.

OBG II 01 (R265)

HOW ARE INSULIN-LIKE GROWTH FACTORS INVOLVED IN FOLLICLE SELECTION

H. Mason (*Abstract not available at time of going to press*)

OBG II 02 (R266)

SCREENING FOR OVARIAN CANCER

David Oram (*Abstract not available at time of going to press*)

OBG II 03 (R194)

THE ANTENATAL DETECTION OF FETAL ANOMALIES AT ST. LUKE'S HOSPITAL WITH SPECIAL REFERENCE TO PROGRESS IN THE DETECTION OF CARDIAC LESIONS IN AN ONGOING STUDY.

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The antenatal detection of fetal anomalies (Prenatal Diagnosis) is a well established obstetric discipline. Various methods used are available and these are presented and discussed including biochemical methods, ultrasound, fetal echocardiography and invasive techniques. The results and effects of an ultrasound screening programme are presented and the effects on obstetric management discussed. Cardiac lesions remain an important statistical factor in the incidence of fetal anomalies and early detection will reduce perinatal mortality and morbidity. Some aspects of antenatal fetal echocardiography at St. Luke's Hospital are presented. Through the antenatal detection of fetal anomalies including cardiac it is hoped to further reduce our perinatal mortality and improve fetal survival through improved obstetric management, co-ordination with paediatricians and paediatric surgeons and potentially through appropriate fetal therapy.

OBG II 04 (R183)

A MISCARRIAGE CLINIC - 5 YEAR FOLLÓW UP

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Introduction: A miscarriage clinic has been functioning in the Department of Obstetrics and Gynaecology at St. Luke's Hospital, Malta for about 4 years.

Methods: To date 176 patients have been referred to the clinic. All patients undergo a thorough history and investigation protocol. 64 were nulliparous and had two miscarriages. 37 patients had 3 recurrent miscarriages. About half the patients had no detectable anomaly.

Results: 40 patients had ovulatory disorders of which 20 had PCOS. 39 patients were found to have raised circulating levels of anticardiolipin antibodies. There were 12 patients with uterine abnormalities and 5 patients with cervical incompetence. 75 patients did not present any abnormality.

Outcome: Patients with ovulatory disorders were treated with a combination of Clomiphene and human chronic Gonadotrophin. There were 13 pregnancies of which 7 carried to term. 3 patients required GNRH analogs with HMG/HCG. Three conceptions all carried to term. Those patients with anatomical anomalies were treated conservatively and ten conceived. 8 live babies were delivered. From 5 patients with cervical incompetence, 3 pregnancies were recorded and all carried to term. Out of 39 patients with raised auto-immune antibodies, 24 pregnancies were recorded and twenty live babies delivered. Patients were prescribed either aspirin alone or aspirin and prednisolone depending on the level of anticardiolipin antibody titres.

Conclusion: The distress caused by miscarriages justifies the running of our clinic. The various successes achieved in individual cases together with the counselling and support offered in all cases attending the clinic have ensured a continued demand and hopefully an expansion in the service. None of the babies delivered from the study group had any anomalies.

OBG II 05 (R182)

HEPARIN HYPOTHESIS: ROLE IN HIGHER ORDER MULTIPLE PREGNANCY

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The placenta of a higher order multiple pregnancy has a large surface area and is potentially subject to repeated placental bed infarcts resulting in chronic ischaemia and an increased incidence of premature labour and low birth weight.

Heparin by protecting against recurrent placental bed infarcts prolongs gestation, increases birth weight and reduces perinatal mortality. This is an observational study on 22 higher order multiple pregnancies treated at St Luke's Hospital, Malta from 1990 to date, the aim of which was to assess the effect of heparin given subcutaneously during the antenatal period on pregnancy outcome. The parameters studied were length of gestation, average birth weight of the foetuses and perinatal mortality.

Results: The results were as follows: the pregnancy of a patient given heparin lasted, on average, one week more than that of a patient not given heparin, perinatal mortality was decreased and birth weight was increased in triplets. The use of heparin in higher order multiple pregnancy prolongs gestation and improves perinatal mortality.

OBG II 06 (R198)

AMBULATORY VERSUS INPATIENT LAPAROSCOPY

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Introduction: Laparoscopy is frequently performed in the gynaecological unit. This intermediate operation has been traditionally performed on an outpatient basis. This operation can be performed with equal efficiency and safety as ambulatory, that is, same day, surgery.

Objectives: Comparison of outcomes of patients admitted overnight and those admitted same day for laparoscopic surgery. Investigation of the patients' perceptions of care in order to provide a basis for improvement of consumer satisfaction.

Methods: 106 patients were admitted for laparoscopy at Gozo General Hospital. 28 were randomly selected and divided into two groups. A three part questionnaire regarding three aspects of patient satisfaction with professional care included: (1) technical – professional relationship (2) information exchange relationship (3) trusting, communication, satisfaction, listening, relationship.

Results: There was a difference between the two groups regarding concern for comfort, explanation of procedures, and discharge instructions. Results for the three subsets of questions indicate that patients for same day surgery, had higher satisfaction rating regarding technical, professional activities, the information provided by the nurses and the trusting relationship perceived to exist between the patient and the nurses.

Conclusion: The provision of same day ambulatory service has become increasingly important in the management of resources. Same day admission programme for laparoscopy patients at our hospital has been well accepted by the consumer. Both groups were satisfied by the peri-operative care.

OBG II 07 (R177)

THE EFFECTS OF A MARINE ALGA ON BONE DENSITY IN POSTMENOPAUSAL WOMEN

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Introduction: A marine alga classified as food supplement and present in our Mediterranean littoral, *Padina Pavonica*, has been shown to have a positive effect on calcium fixation in cell line cultures.

Patients and Methods: A longitudinal study is being performed on 40 postmenopausal women who have been randomised into one of four groups. One group acts as controls and is not receiving treatment and the other three have been given three different doses of the alga. Each woman had the bone density measured at the lumbar spine and femor neck by a DEXA-Norland 386. Haematological studies including lipid profile, serum and urinary calcium and hormone estimation are also performed. A pelvic ultrasound to measure endometrial thickness and a vaginal smear to assess the maturation index are done at the beginning and the end of the study. Collagen markers (Pyridinium crosslink and Procollagen I C-end terminal peptide) are also performed at 3 months intervalls.

Results: The initial results are promising, with an increase in bone density parameters and also a positive trend in the bone collagen markers. Further data is being collated as this research is based on one year treatment.

OBG II 08 (R249)

ALZHEIMER'S DISEASE AND HORMONE REPLACEMENT THERAPY IN POSTMENOPAUSAL WOMEN

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Alzheimer's disease (A.D.) is one of the commonest causes of dementia in adults. Both these conditions are more prevalent in women particularly after the menopause. Studies have suggested that oestrogen therapy may reduce the incidence of early dementia and A.D. in women. This is corroborated by the fact that obese women are less likely to develop A.D. probably due to endogenous oestrogen in adipose tissue. Moreover, arterial walls have been found to be

oestrogen-dependent. It is hypothesized that after the menopause these vessels become rigid, hence the implication in the pathogenesis of A.D. and dementia.

The study aims to assess the possible effects of oestrogen therapy on dementia as well as the incidence of A.D. and dementia in relation to the menopause with or without HRT. 200 women aged between 60 and 75 are being recruited for this prospective study. Cognitive function (including various modalities of memory) is being assessed by means of a standard questionnaire, namely the minimal mental examination. Biophysical parameters are also being measured and these include: weight, height, body-mass index, carotid artery wall thickness (using a Minhorst 2.5 megabyte probe) and doppler flow velocitometry of the carotid. In addition, a complete blood count and hormone profile (FSH, LH, oestradiol) are being taken. One third of women will then be treated with oestrogen therapy while two thirds will constitute the control group. Treatment will be continued for a minimum of 1 year after which all parameters will be reassessed and subjected to strict analytical evaluation.

The study proposes to identify any correlation between cognitive function and oestrogen status and whether there is a statistically significant improvement in cognitive function in women treated with HRT as opposed to controls. In addition, the study seeks to establish if any changes in carotid artery wall thickness or carotid flow affect the incidence of early dementia or A.D. in postmenopausal women.

PSY 01 (R267)

PERINATAL MOOD DISORDER IN A CHANGING CULTURE - A TRANSCULTURAL AND AFRICAN PERSPECTIVE

John L Cox, Department of Psychiatry, Keele University, Staffordshire, U.K

This paper will first outline the core contents of Transcultural Psychiatry and then summarise the Skills, Attitudes and Knowledge that characterise Perinatal Psychiatry. The presentation will conclude with reference to ongoing studies within the field of transcultural aspects of Postnatal Depression including the E.U./International Study and will comment particularly on possible reasons for the relatively low rates of PND in Sweden, Malta and Japan.

Particular attention will be drawn to the Educational needs of Health Professionals within this field, especially those working in Primary Care and in perinatal services.

PSY 02 (R242)

MENTAL HEALTH LEGISLATION IN MALTA. THE RIGHTS OF THE PATIENT VERSUS THOSE OF SOCIETY

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The public in Malta as in other countries has become increasingly aware of patients' rights, be they to quality treatment, to right of refusal to treatment or to access of information. The complexity of these issues is perhaps nowhere greater than in the field of mental health.

In developed countries, mental health legislation has been enacted so as to regulate the compulsory detention and treatment of mentally ill patients, to safeguard their rights and to allow them to opt for voluntary or the least restrictive compulsory treatment possible. Earlier legislation was dominated by provisions to protect the rights of the patient and of society in those patients requiring compulsory detention because of dangerous psychiatric disorder.

Nowadays, however, most psychiatric disorder is treated on a voluntary basis, often in the community. When patients require hospitalisation, their right to non-stigmatising high quality treatment with protection against emargination assumes greater importance. Furthermore, patients most in need and those who pose the greatest danger to themselves or others are often the ones least able to safeguard their own rights. Various countries have adopted legislation to protect such patients' rights. Also, the European Union is drawing up guidelines for the protection human rights and dignity of people suffering from mental disorder especially those placed as involuntary patients in a mental establishment.

It has been suggested, somewhat controversially, that whereas mental health legislation was originally introduced to safeguard good practice, in modern society the very existence of such legislation has become outdated and stigmatising. Such protagonists argue that legislation relating to mental health should only exist within the wider context of non-stigmatising general health legislation.

This paper describes briefly mental health legislation and its application in other countries and in Malta, drawing some comparisons. It highlights strengths and weaknesses of our present legislation as currently applied. Finally it describes some of the changes which should be considered in revised legislation.

PSY 03 (R251)

MANAGING THE RISK OF AGGRESSION

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Managing risk is a fundamental element of all clinical practice. In the arena of psychiatry especially forensic psychiatry, managing the risk of aggression has been a keen area of research in the UK, USA and Canada (Monahan, Steadman, Webster, Harris). Actuarial versus clinical methods of risk evaluation have also been keenly debated and highlighted especially in the United Kingdom at recent Inquiries where mentally disordered patients have acted violently sometimes while under the care of mental health services.

This paper will look at the research evidence available highlighting symptoms and signs of mental disorder, clinical syndromes and environmental, situational and social considerations which have been found to correlate with increased risk of aggression. It will also look at actuarial methods of assessment which are based on this research evidence and which are predictive of increased levels of aggression and look at some of the tools that are being developed to aid clinical decision making when assessing the risk of aggression and implementing risk management plans.

Finally, it will highlight some strategies to improve personal safety when interviewing patients who may be at risk of behaving aggressively.

PSY 04 (R221)

BEHAVIOURAL FAMILY MANAGEMENT IN SCHIZOPHRENIA: A DESCRIPTION AND CASE REPORTS

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The vulnerability-stress model of mental disorder postulates that impairment is most likely to become manifest when the combination of vulnerability and stress factors overwhelms the individual's adjustment capacity. In Behavioural Family Management, stress reduction is effected by education, intensive communication training and problem solving training at family level.

This method has been used in a number of local families with high expressed emotion. This form of intervention will be described and a number of case reports demonstrated. Implications for future service development will be discussed.

PSY 05 (R173)

PREVALENCE RATES AND PSYCHOSOCIAL CHARACTERISTICS ASSOCIATED WITH DEPRESSION IN PREGNANCY AND THE POSTPARTUM IN MALTESE WOMEN

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The study was undertaken to determine the prevalence of psychiatric morbidity during pregnancy and in the postnatal period, identifying sociocultural factors associated with antenatal and postnatal depression and validating the Maltese version of the Edinburgh Postnatal Depression Scale (EPDS).

A random sample of 239 pregnant women booking-in at the antenatal clinic, Karen Grech Hospital, Malta was selected. The first interview at booking consisted of a detailed sociodemographic history and the Revised version of the Clinical Interview Schedule (CIS-R) together with scoring of the Maltese translated Edinburgh Postnatal Depression Scale (EPDS). The sample was again interviewed over the phone at 36 weeks gestation using the CIS-R. The self-report questionnaire was sent by post for completion. A home visit was performed on 229 women at 8-10 weeks postnatally where the CIS-R, the modified version of the Social Maladjustment Schedule and the EPDS were administered together with scoring of the EPDS.

A total of 20.5% of the sample were suffering from neurosis at the first assessment and 16.1% at eight weeks postpartum. The point prevalence of depression meeting ICD-10 research criteria was 15.5% at the first assessment and 11.1% in the third trimester. The period and point prevalence of depression at eight weeks postpartum were 14.4% and 8.7% respectively. However only 3.9% of postpartum depression was new onset.

Antenatal depression was associated with being single, unplanned pregnancy and a negative reaction in the woman and the immediate family. Marital discord, past psychiatric history and family psychiatric history were significantly related to antenatal depression.

Postnatal depression was found to be significantly associated with family psychiatric history, past personal psychiatric history, marital disharmony and poor emotional support, restriction of leisure and social activities and relationship problems with the in-laws.

The EPDS was validated in this sample and found to have excellent psychometric properties, both antenatally and postnatally. It was accepted by the women and easy to use and score,

Depression was found to be common during pregnancy and the postpartum and associated with different variables. The Maltese version of the EPDS would be useful as a screening instrument during pregnancy.

PSY 06 (R103)

COMPARISON STUDY OF ALCOHOL AND ILLICIT DRUG ABUSE IN PATIENTS WITH RECENT ONSET PSYCHOSIS IN LONDON AND MALTA

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Past research has shown that abuse of alcohol and illicit drugs, especially that of cannabis is associated with psychosis. However, it is difficult to make reliable inferences from these studies because they were not conducted in a comparable manner and many did not take into account the influence of cultural background on the choice of substances abused. To overcome these problems, I compared samples of recent onset psychotic patients and normal controls living in two very different cultural settings: London and Malta. In London, acceptance of alcohol intake is comparable to Malta, but acceptance of drugs is much wider than Malta, especially that of cannabis. In both centres, the same criteria were applied to identify subjects and to quantify substance abuse. 119 cases and 96 controls in London, and 45 cases and 61 controls in Malta, were examined. In both centres, psychotic patients abused substances more than controls. A particularly strong association between cannabis abuse and psychosis was shown by the fact that the Odds Ratios (OR) for cannabis abuse were greater in both centres than the OR for substance abuse in general or any other type of substance. OR for cannabis abuse were: London; crude OR = 2.25 (95% CI = 1.22 - 4.14, p = 0.01), OR adjusted for ethnicity and social class = 1.56 (95% CI = 0.78 - 3.12, p = 0.20), Malta; crude OR = 4.29 (95% CI = 0.43 - 42.63, p = 0.18), OR adjusted for social class = 4.08 (95% CI = 0.40 - 41.80, p = 0.20). In both centres, cannabis abuse was associated with an earlier age of onset of non-affective psychosis; in London 2.2 (95% CI = -4.3, -0.03, p = 0.047) years earlier and in Malta 4.7 (95% CI = -8.3, -1.2, p = 0.01) years earlier. This study confirmed the previously reported association between psychosis and substance abuse, particularly cannabis. This association persists across cultures with very different cultural attitudes to drug abuse.

PSY 07 (R100)

WHY DOES THE POPE NEED A CONFESSOR?

Joseph R. Cassar, Anne Marie Cassar. *Mount Carmel Hospital, Attard, Malta*

From myocardial infarction to the flu, from cancer to the hemorrhoids and from mild depression to suicide, the physician is no less afflicted than the rest of humanity. This paper will start by looking into the problems that physicians encounter in their married lives. When medical marriages break down, the sequelae can be devastating to a physician. The twin blessing of a competitive nature and a compulsive personality frequently ensure that a physician will succeed in medicine. These same traits can become anathemas in marriage. Many physicians are poorly equipped to accept defeat and tolerate it so poorly that they are shattered by the misfortune of a failed marriage. Another major problem is burnout. A physician is dedicated to ministering the sick with the goal of having them recover. If the ill do not cooperate by recovering, the stage is set for frustration and eventual burnout. This paper will look at some of the forces causing burnout and its vulnerabilities and prevention. This week and every week two male doctors in the USA on average will kill themselves. In addition, every month of the year a female doctor will also take her life. Physician suicide can be looked at from different perspectives and there are danger signals that can be spotted in a troubled colleague that may be contemplating his or her own demise. Finally we will consider substance abuse and how it affects both physicians afflicted by it and their families, colleagues or patients. In conclusion, interventions by various medical societies toward troubled colleagues will be looked at in order to help instill hope in each

and every one of us that there is nothing wrong with the Pope needing a confessor. Saying, "it will never happen to me," is not a healthy defense but feeling empowered that there is something to do when it happens, is where we should aim.

How agreeable it is that I, the patient am really healthy and he, the doctor, has a serious illness.

The Wolf Man, Brunswick, 1928, p.445

PSY 08 (R166)

RATIONALISING THE USE OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS

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The clinical outcomes of depressed patients (n=124) attending the Psychiatric Outpatients Clinic at St. Luke's Hospital, Malta, who fulfilled the protocol implemented in the prescribing of Selective Serotonin Reuptake Inhibitors (SSRIs) and who were initiated on SSRI therapy, or on a combination of a SSRI and tricyclic antidepressant (TCA), were compared to those of patients maintained on TCA therapy only, in a one-year retrospective study of the medical records of these patients. The objectives of the study were: (1) to establish the scenarios in which the use of SSRIs can be cost effective; (2) to assess and review the existing protocol for the prescribing of SSRIs within the Government Health Services; and (3) to formulate treatment guidelines for prescribers to achieve targeted pharmacotherapy. Despite equal efficacy of TCA only, TCA+SSRI and SSRI only treatment regimens, patients treated with SSRI only had: a significant ($p<0.01$) higher average value for "good months" within a year; were treated with a significantly ($p<0.01$) lower average of concomitant medication, and a significantly ($p<0.05$) lower percentage experienced adverse effects. The SSRI and TCA+SSRI treated patients spent an average of 4.10 and 16.7 days less in hospital, in one year, respectively, compared to the previous year on TCA treatment. This relevant shift away from hospitalisation for patients who had had an SSRI included in their treatment regimen resulted in a corresponding decrease in admission costs, which compensated for the high acquisition cost of these drugs. The impact of the three antidepressant treatments on Quality of Life (QoL) of patients (n=52) was established by structured interview administering a modified Health Measurement Questionnaire (HMQ) before and after 6 months of commencing treatment. A significantly ($p<0.05$) higher percentage of SSRI treated patients showed improvement with respect to seeing friends and relatives. Therapeutic guidelines recommending the SSRI considered to be most suitable for use in specific situations, based, primarily, on the diverse SSRI pharmacokinetic parameters of clinical relevance, were compiled for circulation at Mount Carmel Psychiatric Hospital, in consultation with the consultant psychiatrists and their firms. It is proposed that a history of frequent admissions may be an additional criterion for inclusion in the existing protocol entitling a patient to SSRI treatment.

DEV 01 (R268)

FLASHPOINTS IN SEXUALLY TRANSMITTED DISEASES

Derek Freedman (Abstract not available at time of going to press)

DEV 02 (R010)

ARE THE MALTESE SUNSMART? - SOME WAY TO GO.

Lawrence Scerri, Stephanie Lateo. *Department of Dermatology, Sir Paul Boffa Hospital, Floriana, Malta.*

On a universal level, the public awareness of the harmful effects of the sun on the skin, namely skin cancer and photoaging, has gradually escalated largely as a result of ongoing public educational campaigns. Campaigning on this subject has been going on in the Maltese Islands for a number of years now. This led us to undertake a questionnaire survey to assess the level of knowledge of the Maltese public vis-à-vis sun-related skin damage, as well as to evaluate local sun-protection habits.

Patients and accompanying persons aged 16-50 were recruited from the waiting room of dermatology clinics at Sir Paul Boffa Hospital and private hospitals. Three hundred and thirty three valid questionnaires were available for evaluation. The age of the respondents was evenly distributed. The sex distribution was 215 (64.46%) female, 115 (34.64%) male and 3 (0.90%) unspecified.

The level of knowledge on the sun and the skin was assessed by means of 3 questions (% of right answers i.e. yes): (a) Can the sun cause skin cancer? (93%); (b) Can skin cancer kill? (69%); (c) Does the sun cause skin aging? (85%). Occupational sun exposure was substantially greater in men than in women. Notwithstanding this trend, men used sunblock far less than women when out in the sun both at work and during leisure. A relatively greater use of sunblock was noted in the younger age groups, and in persons with a higher level of education. The media was rated as the most important source of health information (75%) irrespective of the individual's level of education. Other sources namely doctors, schools and family were much less influential with a rating of 25% or less.

Although the Maltese public appears to be well informed on the harmful effects of the sun on the skin, the practice of sun protection is still generally poor especially amongst men. In view of their undeniable wide-ranging influence, the mass media should be further exploited in driving home the message of safe sun practice. Schools are the ideal medium for instilling a safe sun attitude during the formative years.

DEV 03 (R244)

CUTANEOUS LEISHMANIASIS IN THE MALTESE ISLANDS

Joseph L. Pace. *Dermatology Clinic, St. Philip's Hospital, St. Venera, Malta*

Leishmaniasis is increasing throughout the world and the Mediterranean littoral is no exception. This has been attributed to several causes including movement of populations, disturbance of natural habitats by building projects, alterations in immunity especially in post transplant and HIV +ve patients and other unknown factors. In addition, recent years have brought changes in the clinical types of disease reported in the various regions. Cutaneous leishmaniasis was first reported in Malta in the early 1980's. Since that time cases have increased regularly with 1998 showing a 400% increase on the previous year. The clinical features, diagnosis, and treatment are discussed. Preventive methods, in particular dog control are emphasised since this disease is prone to potential severe scarring as well as being detrimental to Malta's major foreign currency earner – tourism.

DEV 04 (R009)

SEXUALLY TRANSMITTED DISEASES IN MALTA - DO THEY EXIST?

Philip Carabot. *St. Philip's Hospital, St. Venera, Malta*

Introduction: Sexually Transmitted Diseases (STDs) are among the most common causes of illness in the world and have far reaching health, social and economic consequences. The clinical consequences of chronic pelvic disease, ectopic pregnancies, infertility and cervical cancer are well known. What is less generally recognized is the association with HIV disease, and the fact that the control of STDs is perhaps the only real practical way of controlling the spread of HIV.

In 1995 there were globally over 333 million cases of the four major curable STDs in adults between the ages of 15 and 49.

Extrapolating from WHO estimates for the region, in Malta there are potentially some 40,000 cases per year. Yet there are no studies on the incidence of STDs in Malta, nor are there any dedicated Genitourinary clinics.

Objective: An attempt will be made to obtain data on the actual numbers of STDs in Malta, as well as to gauge what present level of care exists. This information is imperative to enable policy makers with limited resources to determine and prioritize the most cost-effective interventions.

Method: Use will be made of an operational model used to assess the effectiveness of Tuberculosis control measures and used by the European Commission's HIV/AIDS programme as a sex specific, decision making tool for planning and monitoring STD intervention programmes in developing countries.

Results: These should hopefully be available by March 1999.

HCP 01 (R248)

PRIORITIES IN HEALTH CARE – THE WAY AHEAD

Joseph L. Pace. *Dermatology Clinic, St. Philip's Hospital, St. Venera, Malta*

In an era of increasing costs and concomitant medical expectations, it is imperative that a fair health policy based on equity of access to high standard health care is reached after a wide consensus. Because of lack of flexibility and little patient responsibility, fixed financing systems are doomed to failure resulting as they do in rationing, declared or covert. Rationing has been condemned as unethical by professional medical associations everywhere. The author, who formed part of the World Medical Association Task Force on Priorities of Care, suggests that the only way out is to address the problem on national scale with a compulsory non-profit making health insurance system similar to that found in most European countries the only way out. In addition, concrete proposals are made to face the looming situation when the percentage of senior citizens (including the author's age group) will heavily outnumber the working members of the population.

Note: *Any positive news emanating from Kercem, Gozo, which may well change the situation entirely and render all these suggestions wholly unnecessary.*

HCP 02 (R129)

PLANNING ACUTE HOSPITALS WITHIN A WHOLE SYSTEM CONTEXT

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The purpose of this presentation and paper is to set out the principles of the planning of acute hospital capacity within the context of a whole system model of healthcare delivery. The paper emphasizes the importance of planning and understanding the health-care delivery system outside the hospital and how clinical care can be developed with cross secondary and primary care boundaries. It is these models of care which can inform the physical requirements and configuration for new hospital developments.

The paper will set out the overall process for planning acute hospitals in this way, incorporating as a local example, the planning process involved during the production of the Medical and Design Brief for the new Hospital, Tal-Qtoqq.

HCP 03 (R154)

EVIDENCE-BASED MEDICINE

Myra Kay Tilney. Department of Medicine, University of Malta, G'Mangia, Malta

Evidence-based medicine (EBM) is the application of the best information available to assist patient care. However, the practice of EBM requires best clinical expertise –

“Good doctors use both individual clinical expertise and the best available evidence, and neither alone is enough”. Without clinical expertise, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without current best evidence, practice risks becoming rapidly out-of-date, to the detriment of patients¹. The presentation will cover the steps required to practice EBM, a process which is now a necessary part of the MRCP (UK) and MRCGP examinations in the UK^{2,3,4}. The backup that can be provided with Information Technology will also be demonstrated. A comparison of the ways to optimise physician performance is reviewed⁵.

¹Evidence based medicine: what it is and what it isn't. Sackett DL, Rosenbert WM, Muir Gray JA et al, Edit. BMJ 1996, 312, 71-2)

²British Medical Association. Report of the working party on medical education. London: BMA, 1995

³Standing Committee on Postgraduate Medical and Dental Education. Creating a better learning environment in hospitals. 1. Teaching hospital doctors and dentists to teach. London: SCOPME, 1994

⁴General Medical Council. Education Committee Report. London: GMC, 1994

⁵Davis DA, Thompson MA, Oxman AD, Haynes RB. Changing physician performance, A systematic review of the effect of continuing medical education strategies. JAMA 1995; 274: 700-5

HCP 04 (R098)

WILL EVIDENCE-BASED MEDICINE PRECLUDE RATIONING?

Natasha Azzopardi Muscat. Health Division, Valletta, Malta

The aim of this presentation is to provide a theoretical framework for the debate on rationing health care in the Maltese context. Views expressed in this paper are those of the author and do

not necessarily reflect the current policy of the Health Division. The objectives set for this presentation are to provide an analytical description of trends in rationing mechanisms and to test the usefulness of evidence-based medicine (EBM) as an alternative to rationing. Issues such as the provision of anti-retroviral therapy and mass mammography screening have brought the issue of rationing health care to the forefront. So far such situations have been tackled using a "management by crisis" approach. A number of common international trends in rationing have evolved in an attempt to address such issues. These are the shift from implicit to explicit rationing, public involvement in decision-making and the use of economic evaluation. Economic evaluations rely on putting two sets of information together: costs and some measure of benefit or effectiveness. The former is the realm of economists whilst the latter is dealt with by clinicians. The promotion of EBM has been widely hailed as providing a comfortable alternative to rationing. However whilst EBM seeks to eliminate the provision of ineffective practice, rationing involves making choices between the provision of known effective procedures. The paper concludes that EBM cannot serve as an alternative to rationing but on the contrary will increase the need for rationing as effective new and expensive procedures are made available.

HCP 05 (R035)

TOBACCO CONTROL IN MALTA - PRESENT AND FUTURE

Mario R Sammut, *Family Doctor, Siggiewi, Malta*

Tobacco products have no safe level of consumption. They are the only legal consumer products that cause ill health and premature death when used exactly as the manufacturer intends. Unless concerted action is taken quickly, 250 million of today's children will die prematurely from an avoidable cause - tobacco use. With reference to the World Health Organization's Ten-Point Programme for Successful Tobacco Control, this study reviews the present situation in Malta regarding tobacco control and makes recommendations for future changes. WHO policies involving economic measures are not practised locally. However, a number of local organisations provide information/education, promote awareness, and enhance social competencies regarding tobacco use among children. These organisations also run health promotion, health education and smoking cessation programmes, and they practise monitoring and evaluation of tobacco issues. A set of regulations have been proposed to the Health Ministry's Committee for Smoking and Health which would prohibit the sale of tobacco products to persons under 18 (presently under 16) and at places frequented by them; extend the present limited smoking ban to any work space or public area; institute a total ban on advertising, sponsorship and other forms of promotion; and introduce more conspicuous and effective health warnings on all tobacco products. Tobacco control must be not merely a top public health priority, but a top public policy priority with the government playing a central and crucial role. A coordinating tobacco control authority should be set up to effectively manage all efforts to stem the tobacco epidemic.

RAD 01 (R132)

THE FIRST COMPLETELY FILMLESS RADIOLOGY DEPARTMENT IN IRELAND: IS IT MORE EFFICIENT?

William Cassar Torreggiani, Akram Twair, N Ramesh, Brendan Hogan.

Department of Radiology, Adelaide & Meath Hospital, Dublin, Incorporating the National Children's Hospital (AMNCH); Tallaght, Dublin, Ireland.

Background: Picture Archiving and Communication System (PACS) is a computer network technology in which radiological images are converted into soft copies which then can be displayed on monitors, post-processed, stored and retrieved at any workstation on the hospital net at anytime in a filmless environment.

Many reasons have been proposed for the development and implementation of PACS. One of the most important benefits of this system is the time saved that is spent in waiting, searching and transporting films in the radiology department and the hospital.

The radiology department of the AMNCH hospital was the first in Ireland to install and operate a complete PACS environment. The PACS was installed in the new hospital building in Tallaght and started operating from the first day the hospital moved in.

Purpose: The objective of this study was to evaluate the effect the implementation of PACS would have on the time spent for the radiologist's report to be available for the clinician.

Methods & Materials: A total of 200 random radiological examinations performed in the radiology department of the AMNCH hospital were analysed. 100 of these examinations were done in the pre-PACS department and the other 100 examinations were done in the PACS operated department in the new hospital building.

Forms were distributed for every examination recording the dates and times from the patient's arrival into the department to the time the report was available for the clinician. Comparisons were then performed between the two subgroups.

Results: The PACS group showed significant reduction by a factor of three in the average report turnaround time which was 19 hr. (range 35 min. to 49 hr.); compared with the average for the pre-PACS group of 56 hr. (range 1 hr. to 11 days).

While 39% of the examinations in the PACS group had their reports available on the same day of the examination and 88% were available by the end of the next day; only 14% of the pre-PACS reports were available on the same day of the examination and 60% by the next day.

Conclusion: Our study shows that PACS has made a significant impact on the time between imaging the patient and the time the report was available to the referring clinician. This was particularly true in cases in which the films were removed from the department prior to reporting.

RAD 02 (R084)

THE DIAGNOSTIC VALUE OF ULTRASOUND AND SCINTIGRAPHY IN THE INVESTIGATION OF THYROID NODULES.

Adrian Mizzi, Pierre Vassallo. *Radiology Department, St. Luke's Hospital, G'Mangia, Malta*

Objectives: To assess the accuracy of ultrasound and scintigraphy for distinguishing benign from malignant thyroid nodules.

Method: Thyroid ultrasound and scintigraphic studies performed over the past 3 years (1996-1998) were reviewed (without knowledge of histological findings). Ultrasound features including lesion size, consistency, calcification, margins, extracapsular invasion, and enlarged lymph nodes were assessed. Scintigraphic findings (i.e. cold/hot focus) were determined, and

correlated with ultrasound findings. Patients with up to 3 thyroid nodules were included in the study. Multinodular goitres (>3 nodules) were excluded. An overall impression regarding benign versus malignant aetiology was scored on a scale of 1-5. Subsequently, the histology reports were obtained and correlated with imaging findings.

Results: Preliminary results of studies performed in 1997 showed 30 benign and 2 malignant nodules. The most reliable ultrasound features in favour of malignancy were extracapsular invasion and lymph node involvement. All hot nodules were benign. 20% of cold nodules were malignant. Of the 10 cold nodules, 1 was cystic and benign; 2 were of mixed density and malignant; and 7 were solid and benign. Overall scores indicated a sensitivity of 100% and a specificity of 72%. Cases studied in 1996 and 1998 are still being reviewed.

Conclusion: Combined ultrasound and scintigraphy is highly accurate in detecting thyroid malignancy, however, a considerable false positive rate must be accepted.

RAD 03 (R226)

CT GUIDED BIOPSY OF THE VERTEBRAL BODY C2

V. Serafimov, K. Saliba. *Radiology Department, St. Luke's University Hospital, G'Mangia, Malta*

We present the case of 29 year old gentlemen, who gives an 18 month history of episodes of high cervical pain, radiating posteriorly to the vertex, bilaterally, Right > Left, associated with painful spasms of the trapezius muscle. Initially the pain was relieved with NSAIDs, but it has become progressively worse especially on standing or minor trauma. Lying down and upward traction of the head provides relief. Over the past four months he has also complained of paraesthesia of the right pinna and occipital area radiating below the mandible and extending to the thyroid cartilage inferiorly. Episodes of cervical pain on swallowing (solid and liquids) are also present.

On examination the area of paresthesia is confirmed, but the rest of neurological finding is normal.

Plain radiographs taken of the cervical spine showed massive osteolysis of the body C2 and upper aspect of C3.

MRI exam showed big destructive mass with nearly vanished vertebral body C2, with extension to the vertebral body C3, almost certain disk involvement and high probability for infectious process.

Biopsy of the vertebral body C2 was performed in local anesthesia under CT guidance. Prior to the intervention dynamic study was performed using high dose of contrast medium and dedicated algorithm. Enhancing large mass was confirmed with very aggressive behavior, distracting most of the vertebral body C2, infiltrating the adjacent main vascular structures, almost certainly malignant. The courses of the main vessels were carefully visualised prior to the biopsy. Right lateral approach was used. Three passes were performed: first two with Ciba needle, each from different location. The third pass was done using special bone needle and cylinder of tissue was taken measuring 4mm in diameter and 9 mm in length. Patient was well during and after the procedure. Control CT scan post intervention shows no evidence of any intervention related or other complication.

Initial and the final pathological diagnosis were nearly identical: chordoma with sarcomatoid transformation, most likely, and metastatic Ca or epitheloid sarcoma.

RAD 04 (R114)

BMS 180549-ENHANCED MR LYMPHOGRAPHY: UTILITY FOR DIFFERENTIATING REACTIVE FROM TUMOR-BEARING LYMPH NODES

Pierre Vassallo, Cornelia Matei, Jason A. Koutcher, Memorial Sloan Kettering Cancer Center, New York, New York, USA

Purpose: To determine the value of MR lymphography with intravenously administered BMS 180549, a superparamagnetic reticuloendothelial-system-specific contrast agent, for distinguishing normal and reactive from tumor-bearing lymph nodes.

Materials and Methods: Mature male Copenhagen rats were inoculated with cell suspensions of R3327-MATLyLu rat prostate carcinoma (n=16) or with Complete Freund's Adjuvant (n=15) in the left footpad to generate ipsilateral popliteal lymph node metastases or lymphadenitis. At 12-14 days after inoculation, T1- and T2-weighted MR images of bilateral popliteal areas were obtained before and 24 hours after intravenous administration of BMS 180549 (dose: 30 μ mol Fe/kg body weight). The contralateral popliteal nodes served as controls (normal nodes) for the study. Contrast-to-noise ratios between the nodes and adjacent muscle were calculated in pre- and post-BMS 180549 images. Subsequently, bilateral popliteal nodes were excised for pathologic assessment.

Results: BMS 180549 resulted in *decreased* CNR in reactive (T1-W = -186 \pm 90%, T2-W = -205 \pm 96%) and visualized normal (n=7) (T1-W = -306 \pm 82%, T2-W = -350 \pm 96%) nodes. CNR *remained unchanged or increased* (T1-W = +88 \pm 92%, T2-W = +306 \pm 256%) in tumor-containing nodes. These differences in CNR change between tumor-bearing vs normal and reactive lymph nodes were statistically significant (P<0.05). Histologic analysis showed similar distribution of BMS 180549 within normal and reactive nodes, but minimal to no uptake in tumor-bearing nodes.

Conclusion: Differences in BMS 180549-uptake between tumor- and non-tumor-bearing nodes detected on MR imaging may help differentiate the two entities. Current clinical applications of this technique will be demonstrated in the presentation.

RAD 05 (R003)

THE USE OF EXPANDABLE METALLIC STENTS IN THE PALLIATION OF MALIGNANT DYSPHAGIA; AN EXPERIENCE USING FLUOROSCOPIC GUIDANCE

M. Schranz, D.E. Malone, R.G. Gibney, Department of Diagnostic Imaging, St. Vincent's Hospital, Dublin, Ireland

Aim

The use of expandable metallic stents in the management of dysphagia in patients with terminal disease has emerged as an attractive option to other techniques such as surgery, laser treatment or rigid plastic stents. The aim of this study was to look retrospectively at the experience of our department in the insertion of these stents under fluoroscopic guidance. We looked at the nature of the strictures, the types of stents used, the complications and their management. In particular, we wanted to look at the morbidity, mortality and success rate of this procedure.

Methods

Seventeen stents were placed in 12 patients over a two-year period. We used the procedure notes and records to evaluate the complications related to the procedure and the patients' charts and films to evaluate the degree of palliation.

Results

The commonest indication for stent placement was esophageal carcinoma. Most strictures were

less than 10cm long and were managed with a single stent. The most common complication was aspiration, resulting in death in a single case. Over 90% of patients had complete resolution of their dysphagia. We concluded that despite an associated morbidity and mortality, the placement of expandable metallic stents in malignant dysphagia is feasible, safe and technically appropriate for use in a Radiology Department in selected cases.

RAD 06 (R052)

GUIDE WIRE BREAST LOCALISATION IN MALTA – QUO VADIS?

Kenneth Saliba¹, Marie-Klaire Farrugia², Malcolm P. Crockford¹, Gordon Caruana-Dingli²;
¹Department of Radiology, ²Department of Surgery, St. Luke's Hospital, G'Mangia, Malta

Breast localisation is usually undertaken in those females where mammography alone, or in conjunction with breast ultrasound reveals a suspicious lesion which is clinically impalpable. Localisation under radiological control enables the surgeon to perform an accurate and restricted open biopsy (alternatively a stereotactic core biopsy may be undertaken). Literature review suggests that the detection rate of malignant lesions following these techniques is very encouraging.

In Malta, breast localisation in St. Luke's Hospital has been undertaken for a number of years, particularly after the installation of the mammographic facility. Stereotactic core biopsy is not currently undertaken. We have conducted a retrospective study of **all** the mammographically and ultrasound guided breast localisation procedures conducted from the 1st of January 1997 to the 31st of August 1998 in an effort to objectively evaluate:

- Yield, in terms of malignant/pre-malignant lesions, which would have otherwise gone undetected
- The accuracy of the radiological technique
- Correlation of radiological and surgical adequacy re: placement of the guide-wire, as indicated by the number of biopsies submitted before a satisfactory specimen radiograph is obtained
- Referral criteria for breast localisation

We also propose to suggest guidelines and recommendations that could render the service more efficacious

RAD 07 (R007)

ULTRASOUND MANAGEMENT OF SCROTAL SWELLING

Michael Micallef, W. Cassar Torreggiani, M. Hurley, B. Hogan. *Department of Radiology, Adelaide & Meath Hospital, Dublin, Ireland*

Objectives:

- (i) To establish the causes of scrotal swelling in the hospital catchment population.
- (ii) To define the role of ultrasound examination in the management of scrotal swelling.

Materials & Methods:

In a time span of 18 months, 587 patients were examined using a high frequency transducer with pulsed and colour doppler facilities. In a retrospective study of radiological reports and patients charts, the causes of scrotal swelling were established and representative cases were selected.

Conclusions:

The patients with scrotal swelling were 324, representing 55% of the total examinations performed. The commonest causes were epididymal cyst (33%), simple hydrocele (29%), infection (27%), tumour (2.5%). Ultrasound examination distinguishes extratesticular causes

(most often benign) from intratesticular ones (commonly malignant). The grey scale appearances of torsion, tumours, trauma or infection can all look very similar. In the case of the acute scrotum, colour doppler is most helpful in differentiating torsion and infection.

RAD 08 (R002)

MAGNETIC RESONANCE IMAGING - STATE OF THE ART

Anthony Zammit, *King Fahd Armed Force Hospital, Dept. of Radiology, Kingdom of Saudi Arabia*

Introduction

Magnetic Resonance (MR) Imaging is a recent radiological investigation ideal for imaging of stationary organs such as brain, spine and structures such as bones and soft tissues. MR utilises protons within nuclei of hydrogen atoms (hydrogen being more sensitive to MR) within the body for creating contrast by depiction of the proton density in tissues. Contrast is also varied by T1 weighting, which gives images a more distinctly anatomical perspective, while T2 weighting sequences result in a more pathological aspect.

Present

Now Fast Sequences such as Fast Gradient Echo as Fast Low Angled Shot (FLASH) and Echo-Planar Imaging (EPI) are recent advances which have brought MR Imaging to the sub-second imaging level. This has resulted in improvements due to imaging with 512 and 1024 matrices resulting in higher resolution in shorter acquisition time. Reduced respiratory, cardiac and patient movement artifacts have also taken MRI into the thoracic, cardiac, abdominal and uncooperative patient imaging realm. MR Angiography is at present depicting the Circle of Willis arteries, carotid bifurcation, renal arteries and peripheral arteries clearly without the need of contrast in dubious cases, gadolinium contrast improves MRA quality.

Future

New sequences include: cerebral Diffusion Weighted Imaging can now depict an infarct immediately. Functional Brain Imaging can now visualise function of specific cerebral areas on movement of limbs and digits. Half-Fourier sequences such as HASTE can image a slice in head region in 2 seconds at good resolution in uncooperative patients. In the abdomen, MR Cholangio Pancreatography will in future replace diagnostic ERCP and MR Urography will probably replace contrast urography. In orthopaedic imaging, DESS (Dual Echo Steady State) is differentiating cartilage from bone and synovial fluid, resulting in better depiction of disease. In MRA, the large branches of the pulmonary arteries and coronary arteries are already being depicted will with further improvement expected.

Conclusion

The multiple advantages of MRI make it the best imaging modality at present time. Cost being the main limiting factor for routine use of MRI.

RAD 09 (R045)

THE IMPACT OF MRI IN MALTA - AN AUDIT

Michele Calleja, *Malcolm P. Crockford. Department of Radiology, St. Luke's Hospital, G'Mangia, Malta*

Objectives:

- (1) Auditing the process by which MRI reports are generated.
- (2) Understanding the changes in clinical practice provoked by the introduction of MRI.

(3) Underlining the importance of MRI by the demonstration of several interesting cases in which MRI established a diagnosis.

Design:

Review of all the MRI request summaries as well as the corresponding traceable MRI reports.
Face to face interviews with radiographers with regards to MRI machine procedures and patient tolerance.

RAD 10 (R131)

THE VALUE OF CONTRAST-ENHANCED 3D MRA IN THE PRE-OPERATIVE EVALUATION OF PATIENTS WITH AORTO-ILIAC DISEASE

W. Cassar Torreggiani, J. Varghese, P. Haslam, M. Lee. *Department of Radiology, Beaumont Hospital, Dublin, Ireland*

Purpose: To evaluate the usefulness of contrast-enhanced 3D MR angiography (CE MRA) as an alternative to trans-lumbar or brachial angiography in the pre-operative work up of patients with aorto-iliac disease.

Materials & Methods: Sixteen patients (M:F, 12:4; mean age, 62y; range, 45-77y) with aorto-iliac disease precluding femoral puncture for trans-femoral angiography underwent pre-operative CE MRA and conventional angiography via the trans-lumbar (n=3) or brachial (n=13) route.

All patients subsequently underwent surgical or interventional treatment for their vascular disease with on table angiograms performed in selected patients.

Results: CE MRA correctly diagnosed the presence of aortic (n=8), iliac (n=2) or combined aorto-iliac occlusions (n=6) in all patients when compared to conventional angiography. It also correctly determined the level and extent of occlusion in all patients although the degree of stenosis was overestimated in 2 patients with iliac disease. The distal vessels were visualized down to the common femoral arteries in all patients and to the level of the proximal superficial femoral arteries in 7 patients. Thirteen patients underwent axillo-bifemoral bypass surgery, 2 patients had percutaneous iliac stent placement and one patient had aortic embolectomy based on these findings.

Conclusion: CE MRA gave anatomical detail of the occlusion, proximal aorta and distal run-off sufficient to plan surgery and should therefore be considered as the first line of investigation in such patients.

PAT II 01 (R031)

EVOLUTION OF METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA) INFECTION IN MALTA

Michael A. Borg, Noel Abela, Paul Pace *Infection Control Unit, St. Luke's Hospital, G'Mangia, Malta*

Methicillin Resistant *Staphylococcus aureus* (MRSA) has emerged as a major nosocomial pathogen in the past decade and its importance looks set to increase in the next millenium with the isolation of strains in Japan and the USA exhibiting intermediate resistance to vancomycin (VISA) within the past year.

The first cases of MRSA occurred in Malta in 1995 from the Intensive Care Unit of St. Luke's Hospital. The organism subsequently spread to involve, in ever greater numbers, the medical and surgical wards in the same hospital as well as other hospitals on the island. This paper will trace

the epidemiology of MRSA infection in Malta over the past 4 years. Potential factors responsible for its dissemination, the infection control methods adopted to contain spread and possible future scenarios will be discussed.

PAT II 02 (R043)

**LABORATORY TESTING FOR HUMAN IMMUNODEFICIENCY VIRUS (HIV)
IN THE MALTESE ISLANDS**

Christopher Barbara, Virology Laboratory, Department of Pathology, St. Luke's Hospital, Malta. Alfred Portelli, Department of Pathology, Medical School, University of Malta, Malta

Tests for HIV antibodies have been carried out regularly at the Virology Laboratory at St. Luke's Hospital since June 1985, shortly after testing became available in developed countries. The initial tests involved first-generation EIA assays where purified HIV lysates coated onto beads were used as antigen. Other more specific tests including confirmatory assays were introduced as these became available. At present preliminary HIV antibody tests are carried out by the latest automated EIA technology.

The total number of samples submitted up to November 1998 amount to 39,355. From these 155 were found to be reactive.

A recurring problem is that most samples are submitted to the laboratory anonymously. More than one sample from the same patient (possibly from different sources) may be submitted to the laboratory for testing. The number of positive tests are therefore not necessarily indicative of the true number of positive patients. For this reason a coding system is being studied and will be put forward to the Department of Health for possible implementation.

PAT II 03 (R044)

**MYCOPLASMA PNEUMONIAE INFECTIONS IN THE MALTESE ISLANDS: IgM
ANTIBODY DETECTION USING ENZYME IMMUNOASSAY TECHNIQUES**

Alfred Portelli, Department of Pathology, Medical School, University of Malta.

Christopher Barbara, Virology Laboratory, Department of Pathology, St. Luke's Hospital

Mycoplasma pneumoniae is a free-living micro-organism which is classified in the family Mycoplasmataceae. It is primarily a human respiratory pathogen and the infection may vary from a mild pharyngitis to a pneumonia. *M. pneumoniae* infections are usually endemic in the community but periodic epidemics can also occur. These micro-organisms are sensitive to specific antibiotics and a laboratory diagnosis, which traditionally is carried out in virological laboratories, is therefore essential.

Studies were carried out at the Virology Laboratory, St. Luke's Hospital involving 1022 cases taken during the period 1995 - 1998. Blood samples from patients suffering from respiratory tract infections were examined for antimycoplasma IgM antibodies using enzyme immunoassay (EIA) techniques. Out of a total of 1022 samples 140 or 13.7% were found to be reactive. Compared to the traditional culture methods EIA techniques are very rapid methods of diagnosis, the result being communicated to the clinician in a few hours. Appropriate antibiotic therapy can thus be started without much delay and for maximum benefit to the patient.

PAT II 04 (R085)

MENINGOCOCCAL DISEASE IN MALTA: 1994-1998

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Neisseria meningitidis causes a severe infection resulting in meningitis and/or septicaemia. Over the past 3 years, Malta has experienced an upsurge of cases. We reviewed the epidemiology of Meningococcal disease (MD) in Malta over the period 1994-1998, and analysed community and hospital related practices, together with predictors of outcome, for cases admitted to St. Luke's Hospital.

In all, we studied 57 cases of MD. In 1998, there were 26 cases of MD, with an increase in incidence from 0.8/100,000 population in 1994 to 7.2/100,000 population in 1998 (χ^2 for trend=26, $p<0.0001$). Case fatality rate (CFR) has decreased (χ^2 for trend 0.24, $p=0.62$). Overall CFR was 21.1%. CFR was 64.7% for meningococcaemia, 0% for meningococcal meningitis and 3.7% for both occurring together. Factors significantly associated with a worse outcome were: an older age at presentation; presence of shock, disseminated intravascular coagulopathy, elevated creatinine and a normal white cell count, at presentation; requirement of inotropic agents and albumin; and direct admission to Intensive care from Casualty.

We acknowledge the support of Dr. C. Mallia Chairman Department of Medicine, Dr. S. Attard Montalto Chairman Department of Paediatrics and Dr. M. Muscat SMO Department of Public Health. We also acknowledge the contribution of the Consultants involved, towards the management of these patients.

PED I 01 (R269)

CHILDHOOD VASCULITIDES

Michael Dillon *(Abstract not available at time of going to press)*

PED I 02 (R079)

NON-SURGICAL CLOSURE OF ATRIAL SEPTAL DEFECTS - INITIAL EXPERIENCE IN MALTA

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Defects in the secundum portion of the atrial septum (ASD) vary in size and shape. The natural history of ASD is that small defects undergo spontaneous resolution, while large defects persist, and result in shunting of blood from the left atrium to the right atrium. Significant shunting results in volume overload of the right atrium and ventricle, and eventual right ventricular failure in middle age. ASD requiring intervention is found in 0.2/1000 live births, and constitutes 5% of all congenital heart disease. Treatment involves closing the defect, and since the early 1950s, surgical closure under total cardiopulmonary bypass has been practised. Non-surgical closure of ASD was first reported in the mid 1970s. Closure was achieved by means of a device delivered through a cardiac catheter. Further research has led to a variety of devices which have become widely accepted and commercially available since the early 1990s. We describe the initial experience in non-surgical ASD closure in 3 children by interventional cardiac catheterisation at the Angiosuite at St. Luke's Hospital, Malta. The delivery system used was an Amplatzer device, which was delivered under angiographic and transoesophageal control. The total duration of inpatient stay was 48 hours, and there were no complications.

PED I 03 (R070)

A STUDY ON CHILDHOOD OBESITY AND ASSOCIATED FACTORS

Sandra Buttigieg

Several epidemiological surveys done in Malta have found a prevalence of obesity in the Maltese population at all the ages studied. The well-documented risks of obesity and overweight in adulthood include the most important causes of mortality and morbidity that is diabetes, hypertension, coronary heart disease and stroke.

International studies have linked childhood obesity with the condition in adulthood. The important implication is that preventing the condition in childhood, will reduce the incidence of the above-mentioned diseases. The epidemiological studies on childhood obesity in Malta have tackled the ages of four, five and ten year olds. There is a high prevalence of obesity, in comparison to international studies. It is therefore of public health significance to update existent information. A reduction in obesity and overweight will certainly improve the overall health status of the Maltese population. It is the aim of the present study to improve on already available data and focus on the three-year old children. This is an important age to consider, because children would not have started proper schooling and are thus under the total influence of their family environment. The study conducted is a point prevalence study and is based on the WHO proposed indicators used to measure health (for all) target 16: "Promoting Positive Health Behaviour". The activities included conducting a health interview on a randomly selected sample of two hundred, three-year old Maltese children.

The result show that childhood obesity is prevalent at the three-year old age group and may be significantly affected by the lack of parental awareness of the health promotion campaigns on "healthy eating". The high prevalence of parental obesity has confirmed earlier studies on adult obesity in Malta and may be associated with childhood obesity. The study also includes the association of childhood obesity with other variables, namely birth weight, level of breast feeding, weaning practices, childhood nutrition, socio-economic conditions, parental educational attainment and position in the family.

PED I 04 (R116)

SHORT COURSES OF TESTOSTERONE ENANTHATE FOR THE TREATMENT OF CONSTITUTIONALLY DELAYED PUBERTY: A RETROSPECTIVE ANALYSIS

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Aim: To determine the effect of short courses of testosterone enanthate on sexual development and final height attained in boys with constitutionally delayed puberty.

Methods: A retrospective analysis of patients with constitutional delay of puberty and treated with a short course of testosterone enanthate (250 mg per month for three months), with further courses if the response to the first course was unsatisfactory. Twenty-eight of seventy-eight patients with delayed puberty were diagnosed as having constitutional delay in puberty after exclusion of endocrine, metabolic or systemic disease. Nineteen of the twenty-eight patients consented to treatment and attended follow-up clinics regularly. Serum basal and LHRH-stimulated LH and FSH levels as well as testosterone levels prior to the initiation of and after conclusion of treatment were measured in all patients. Skeletal measurement was assessed at yearly intervals by radiographic examination of the left hand and wrist.

Results: Administration of testosterone enanthate 250 mg per month for three months with a

maximal frequency of four courses over the follow-up period of two years results in a significant and satisfactory induction of sexual maturation. Assessment of the definitive final height in eight of the nineteen patients in the long term (the others were lost to follow-up) revealed that a mean height of 172.6±2.5 cm was attained as compared to a predicted height of 175.4±2.5 cm, a difference which was not statistically significant. Analysis of the height attained two years after the initial visit revealed an overall increase of 11.3±0.8 cm over the two-year period. The difference between chronological age and skeletal age prior to initiating treatment was 3.6 ± 0.4 cm and two years later 3.1 ± 0.6 cm, evidence that there was no significant acceleration in skeletal maturation.

Conclusions: Short-term high-dose treatment can be employed in the treatment of patients with delayed puberty since the advantage of inducing a rapid induction of pubertal development and thus improving psychological well-being is not offset by a later effect on final adult height attained.

PED I 05 (R060)

SCROTAL APPROACH FOR INGUINAL HERNIA REPAIR IN BOYS.

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Inguinal herniae are common in children. A new operative approach is described whereby the incision is placed in a scrotal fold such that the resultant scar is almost invisible after complete healing.

Between January 1997 and May 1998, 79 consecutive cases of inguinal herniae were repaired via a scrotal approach. The average age at surgery was 2 years and 9 months with a range of between 2 weeks and 13 years. The herniae were right-sided in 50 boys (63%), on the left in 23 (29%) and bilateral in 6 (8%). At follow up of 6 to 23 months (average 19 months) there were no cases of recurrence. The wounds healed well in all cases with excellent cosmetic results.

The surgical procedure is described.

PED I 06 (R055)

POSTOPERATIVE EPIDURAL ANALGESIA ON A PAEDIATRIC GENERAL SURGICAL WARD

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Postoperative epidural analgesia is a well established technique usually reserved for the Intensive Care or High Dependency Unit setting. We present 8 cases where epidural analgesia was used for in children who were nursed on a paediatric general surgical ward. The catheter was maintained for between 36 and 52 hours. Non-opioid analgesics was used in all cases during weaning from the epidural. The pain scores (OPDS) of these children are presented. There were no major complications.

The nursing protocol for care of the epidural catheter and administration of analgesics is described.

PED I 07 (R061)

ONGOING ASSESSMENT OF NUTRITIONAL STATUS IN CHILDREN WITH CANCER

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The nutritional status of a child on cancer therapy influences both tolerance of and response to treatment. However, it is difficult to assess nutritional status on a daily basis as an accurate quantitation of the calorie intake is difficult. Anthropometric and biochemical parameters are prone to error and often reflect past rather than current nutritional status. In practice, a subjective clinical assessment is usually relied upon. This study objectively appraises the value of such an assessment. Based on clinical symptoms that alter oral intake and absorption of food, a scoring system was designed to assess nutritional status on a day to day basis. A symptom score (SS) of 10 implied "normality"; 0 maximum debility. Over a 2-year period 511 daily scores were recorded in 30 patients aged 0.7-17.5 years. Patients were studied at presentation and during treatment for acute lymphoblastic leukaemia (ALL, $n=14$); solid tumours receiving megatherapy with autologous bone marrow rescue (ABMR, $n=8$), and chemotherapy for different tumours (miscellaneous, $n=8$). The SS was compared with other nutritional parameters, including sequential anthropometric indices, albumin, insulin-like growth factor-I (IGF-I), IGF binding protein-3 (IGFBP-3), and whole body protein turnover (WBPT) using [1-¹³C]leucine. The mean SS was reduced at diagnosis (median score=8), improved during first remission ($p=0.002$), fell to a minimum during febrile neutropenia ($p=0.0009$), and improved with clinical and haematological recovery ($p=0.0009$). A reduction in SS was related to fever ($p=0.001$) and a fall in neutrophil count ($p=0.001$). There was no correlation with anthropometric indices, IGF-I and IGFBP-3 levels. Paired WBPT studies in 9 patients showed that SS correlated well with protein breakdown ($p=0.026$). The results suggest that the ongoing nutritional status of children with malignancy undergoing chemotherapy is best assessed using simple clinical parameters.

PED II 01 (R144)

MILD HYPOTHERMIA FOLLOWING BIRTH ASPHYXIA – PRELIMINARY OBSERVATIONS

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Recent experimental evidence has shown that moderate hypothermia reduces hypoxic-ischaemic cerebral injury. However, clinical trials of this potential therapy are complicated by the need for very early identification and intervention, uncertainty about the correct cooling protocol, and concern about potential toxicity. We therefore undertook a preliminary observational study to determine possible toxicity and the feasibility of performing a definitive study. Infants were considered suitable for study if they developed: evidence of fetal distress from heart rate monitoring; metabolic acidosis with a blood pH <7 immediately after birth; and need for mechanical ventilation from birth. Infants with an abnormal amplitude integrated electroencephalograph (aEEG) record, which has been associated with >80% probability of poor neurological outcome, were cooled for 48 hours using a temperature controlled forced air system after obtaining informed, written parental consent. Five infants, birth weight 1.8-3.6 Kg and gestation 34-40 wks, who met the inclusion criteria, were cooled within six hours of birth to a

rectal temperature of 33.5°C - 34°C for 48 hours. Subsequently the rectal temperature was allowed to increase at the rate of 0.5°C / hour until normothermia was restored. All infants treated with cooling developed the multisystem disorder characteristic of severe birth asphyxia. One infant died following withdrawal of intensive care according to the parents' wishes. Neurological examination of the four surviving infants was normal or showed minor abnormalities in tone. Serial MRI showed signs consistent with mild hypoxic-ischaemic injury. These observations show that forty-eight hours of whole body cooling to a rectal temperature of 33.5°C – 34.5°C can be undertaken safely. The lack of neurological and neuroimaging signs of severe cerebral damage in four of the five infants is encouraging.

PED II 02 (R069)

SEIZURE CHARACTERISTICS IN CHILDREN WITH MENTAL RETARDATION

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Purpose: Seizure characteristics were analysed in a population of children with mental retardation and active epilepsy.

Methods: Children were identified from the local special school population and the Children's Outpatients Department. Medical files were reviewed, clinical examination and interviews with parents, carers and school personnel were performed.

Results: In the 55 children identified (38 males, 17 females) the median age of seizure onset was 3 years for the cohort, 5 years in children with mild to moderate mental retardation and 0.92 years in children with severe mental retardation. Current seizure groups were partial in 15 (27.3%), generalised only in 34 (61.8%), and mixed partial and generalised in 6 (10.9%). The commonest seizure types were tonic clonic, atypical absences, complex partial and myoclonic seizures. A total of 25 children (45%) had more than one seizure type. Daily / weekly seizures occurred in 23 (43%) children. In the partial seizure group there were fewer children with severe mental retardation, cerebral palsy and visual impairment as compared to the generalised seizure group. Most children with cerebral palsy, severe mental retardation and visual impairment had frequent seizures needing a median of two anticonvulsants.

Conclusion: Children with a poor functional status (severe mental retardation, cerebral palsy, and visual impairment) often have seizures which are difficult to control thus presenting an added burden on the family and carers. The cerebral damage causing mental retardation and epilepsy is probably the main factor in terms of seizure outcome.

PED II 03 (R204)

GENETIC TESTING OF CYSTIC FIBROSIS IN MALTA

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Cystic fibrosis is the most common autosomal recessive disease among Caucasian population with an incidence of 1 in 2000 to 3000 births. The diagnosis is suspected in neonates with meconium ileus, pancreatic insufficiency and failure to thrive, recurrent and persistent lung infections initially with *Staph. Aureus* and later with *Pseudomonas*, obstructive lung disease and bronchiectasis. Other manifestations include cirrhosis of the liver, diabetes mellitus and

infertility. Positive sweat test is confirmatory for the diagnosis. Up till recently cystic fibrosis was considered rare in Malta.

The CF gene is located on chromosome 7q31.2 and codes for the CF Transmembrane Regulatory Protein, containing 1480 amino acids and molecular mass of 170000. More than 350 mutations in this gene have been found, the most common being ΔF 508 found in about 70% of CF patients.

The correlation between genotype and phenotype is substantial for pancreatic function with 85% of patients being pancreatic insufficient if having two severe mutations while pancreatic sufficient patients have one or two mild mutations. Genotype does not correlate well and is not predictive for the severity of pulmonary involvement and therefore for the prognosis of CF patients. However specific mutations have been associated with congenital absence of the vas deferens.

Molecular diagnosis of CF is based on a PCR method mutation analysis and is highly reliable. It was introduced in Malta in February 1998. We have analysed 12 referred cases and 9 family members. We found 3 ΔF 508 Homozygotes, 1 ΔF 508/G 542X, 1 ΔF 508/E831X compound heterozygot, in 4 we did not find any of the mutations we tested for and 3 are in process. Among the relatives 7 were ΔF 508 Heterozygotes, 1 carried G 542X mutation and 1 was normal. Detection of carriers amongst relatives is an important step towards prevention. More innovative measures such as 1st polar body biopsy and in vitro fertilisation will offer a better chance for couples at risk to get a healthy child within the near future.

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PED II 04 (R155)

THE IMPACT OF IN-LINE BACTERIAL FILTERS ON CENTRAL LINE RELATED SEPSIS IN SICK NEONATES

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A prospective case-controlled study was conducted at the Neonatal Intensive Care Unit at St. Luke's Hospital, Malta. The aim of the study is to determine the impact of in-line bacterial filters used with centrally-placed indwelling catheters on the rate of catheter-related sepsis.

The rate of neonatal sepsis was estimated in a cohort of 42 babies (Group 1) with indwelling central lines plus a bacterial filter. This was compared to the rate of neonatal sepsis in a control group of 40 babies (Group 2) with an indwelling central line but without a bacterial filter over the previous 12 months. There was no significant difference in the birth weight and gestation between the two groups. Sepsis was defined as a positive blood culture(s) from central and/or peripheral blood associated with clinical signs of neonatal sepsis.

The rate of sepsis in Group 1 and Group 2 was 5% and 21.4% respectively ($p < 0.01$). The study also identifies the local flora responsible for catheter-related sepsis in the NICU of St. Luke's Hospital and outlines both the advantages and cautions in the routine use of bacterial filters in sick neonates.

PED II 05 (R111)

QUALITY OF LIFE OF SURVIVORS FOLLOWING TREATMENT IN THE EARLY NEONATAL PERIOD

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Intensive neonatal care has improved the survival rate of critically ill neonates. However, there is growing concern about the long-term prospects of these survivors. The objectives of the study was to assess the quality of life of children aged six years, who in the early neonatal period required treatment at a special care unit. A retrospective cohort study was carried out with a study population of 413 of which 181 received treatment and 232 were not exposed. The quality of life was assessed subjectively by parents/carers of the study children using a postal questionnaire based on a multi-attribute classification system. Eight domains were investigated: hearing, vision, speech, mobility, emotion, learning ability, self care and pain. 67% of cases compared to 74% of controls had normal function in all eight domains. Chi squared analysis showed no significant difference between cases and controls on a global level of function. For individual attributes, cases had a significantly worse function in speech (P=0.034) and self care (P=0.006).

When compared to female cases, male cases had a significantly worse overall function (P=0.004) and poorer function in speech and learning abilities. No significant difference was observed when outcome was assessed according to gestational age at birth and birth weight. This study was able to show that survivors of treatment in the early neonatal period have a favourable quality of life and a good functional outcome indicating an overall beneficial effect.

PED II 06 (R273)

ATTENTION DEFICIT DISORDERS

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There is a growing interest and increasing awareness in the general community about *ATTENTION DEFICIT DISORDERS*, (**A.D.D.**) on its own or that associated with *Hyperactivity (A.D.H.D.)*. The combination of Inattention, Hyperactivity and Impulsiveness in childhood is recognised as a disorder when these behaviours are severe, developmentally inappropriate and impair function at home and at school. There has been a growing realisation that Attention Deficit Disorders persist into adulthood for many individuals.

There is a growing awareness of the problem here in Malta and the incidence is on the increase reflecting trends seen in many developed countries.

Management of the problem must be broad based and comprehensive involving a multidisciplinary team, behavioural therapy, and pharmacotherapy especially with stimulant drugs. The use of stimulant drugs is still in its infancy on our Island.

It is only by adopting this integrated approach that we can achieve results in what can be a very distressing problem in families

PED II 07 (R080)

TRENDS IN PRESENTATION OF CONGENITAL HEART DISEASE IN MALTA

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Differing pathological haemodynamics in cardiac malformations lead to varying modes and timings of presentation. This study identifies historical trends in presentation of congenital heart disease in a population-based study. Inclusion criteria included all patients diagnosed as having congenital heart disease (CHD) in Malta (n=871) who were born between 1960 and 1994. Analysis of trends in referral sources and modes of presentation was performed. The number of patients diagnosed with CHD increased over the period under study. For both patients not requiring intervention (n=283) and those requiring intervention (n=585), the proportion diagnosed prior to hospital discharge increased ($p \leq 0.005$). There was a decreasing trend for general practitioners to refer cases ($p < 0.0001$), and an increasing trend for paediatricians to refer such patients ($p \leq 0.0003$). The commonest presentation to the general practitioner was an incidental finding (92%), while paediatricians referred more patients for cyanosis or heart failure ($p \leq 0.005$). For lesions not requiring intervention, the commonest lesion referred was ventricular septal defect from all sources. For lesions requiring intervention, the commonest lesion detected prior to hospital discharge was tetralogy of Fallot. Atrial septal defects were the commonest lesions detected after discharge by both paediatricians and general practitioners. Diagnosis prior to discharge from hospital is desirable as undiagnosed patients with CHD may present with deterioration severe enough to cause death before intervention can be undertaken. An increase in the proportion of hospital diagnoses is attributed to increasing rates of hospital delivery, and greater training and experience in doctors performing neonatal examinations prior to discharge. Patients diagnosed after discharge are increasingly diagnosed by paediatricians due to an increasing pool of paediatricians and better parent awareness and education.

MED III 01 (R270)

MUSCULOSKELETAL DISEASES: DIAGNOSIS AND MANAGEMENT

Carol Black (*Abstract not available at time of going to press*)

MED III 02 (R223)

SYSTEMIC LUPUS ERYTHEMATOSUS IN MALTA

Carmel Mallia. *Department of Medicine, St. Luke's Hospital, G'Mangia, Malta*

Systemic lupus erythematosus is a multisystem autoimmune disorder which is the most diverse of the connective tissue diseases. It can affect any organ of the body, so that its clinical manifestations can be extremely varied, and it can also display a very wide variety of immunological manifestations. The aim of this study was to analyse the clinical and serological abnormalities of Maltese patients with systemic lupus erythematosus and compare them with similar studies. The study is based on repeated assessments of patients who have been seen at the Rheumatology Clinic, St. Luke's Hospital, for periods ranging from six months to ten years.

MED III 03 (R231)

THALIDOMIDE REVISITED

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Thalidomide has been termed the most notorious human teratogen. The drug was introduced in 1956 as a sedative and to treat nausea and vomiting in pregnancy. By the end of 1961, the drug, sold under 51 different brand names, was identified as a human teratogen and the product licence revoked. More than 10,000 babies world-wide were born with malformations attributed to the use of thalidomide in pregnancy. However it never completely vanished as a therapeutic option. Rapid resolution of the symptoms of erythema nodosum leprosum has been reported. More recently it has also been found to be useful in treating autoimmune disorders such as Behcet's disease, aphthous stomatitis, systemic and discoid lupus, and rheumatoid arthritis. It has also been evaluated for treating life-threatening diseases such as AIDS wasting, graft-versus-host disease and malignancies. In this paper we present five patients who were treated with thalidomide on our unit and discuss the potential uses of the drug.

MED III 04 (R147)

DERMATOMYOSITIS IN MALTA

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Dermatomyositis is an inflammatory disease involving muscle and skin that results in proximal muscle weakness and typical cutaneous lesions. Although uncommon as a disease entity, a number of cases are/ have been under regular review at the rheumatology clinic. The presentation, disease manifestations and management of this group of patients were studied.

A review of the more recent literature on Dermatomyositis was undertaken.

MED III 05 (R130)

TOXICITY PROFILE OF METHOTREXATE IN RHEUMATOID ARTHRITIS - A PRELIMINARY SURVEY

Bernard Coleiro, Carmel Mallia. *Department of Internal Medicine, St Luke's Hospital, G'Mangia, Malta*

Following numerous clinical trials and clinical experience, methotrexate has been established as an effective disease-modifying agent in rheumatoid arthritis. A number of patients with rheumatoid arthritis attending the Rheumatology Clinic at St Luke's Hospital are currently receiving this second line agent. A survey has been conducted to assess the toxicity profile of methotrexate in 33 of these patients who were followed up for at least 1 year or until they developed side effects necessitating discontinuation of treatment.

The most serious side effects were haematological and included one case of pancytopenia (3%) which responded to intravenous folinic acid and another case of megaloblastic anaemia(3%) which resolved on discontinuing methotrexate. These figures are higher than the worldwide reported prevalence of pancytopenia and overall haematological toxicity(1.4% and 3% respectively) possibly due to the small number of patients studied and also due to failure to administer prophylactic folic acid concurrently with methotrexate in the earlier treated patients.

Asymptomatic elevations of serum alanine aminotransferase levels occurred in 19 (58%) of these patients. The enzyme settled spontaneously in 5 patients, on reducing the dose of methotrexate in another 4, and on discontinuing the drug completely in a further 8 patients.

Although commonly associated with methotrexate, gastrointestinal side effects including stomatitis were only encountered in 2 (6%) of our patients.

Regular monitoring of a complete blood count and liver function tests has helped to detect the more serious side effects of methotrexate at an early stage enabling successful intervention in all of the above patients.

MED III 06 (R071)

OUTCOME OF TREATED END STAGE RENAL DISEASE PATIENTS IN MALTA

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

Aim: To evaluate patient survival in a large cohort of Maltese end stage renal disease (ESRD) patients. The outcome of these patients treated with dialysis in Malta has not been studied.

Methods: Records of all 152 patients treated by one physician over a six year period were retrospectively analysed. Demographic features, modality of renal replacement therapy (RRT), diabetic status and overall survival were abstracted.

Results: 93 males and 58 females were accepted for dialysis therapy - 1 female had pre-emptive living renal transplant. 78 patients had chronic haemodialysis (HD) and 73 patients were commenced on Chronic Ambulatory Peritoneal Dialysis (CAPD) as follows:

| | HD | | CAPD | |
|-----------------------------|-----------|-----------|-----------|-----------|
| <i>M/F</i> | 51/27 | | 42/31 | |
| <i>Diabetic %</i> | 25.6 | | 26.0 | |
| <i>M/F</i> | 14/6 | | 11/8 | |
| <i>Modality switch</i> | 1 to CAPD | | 13 to HD | |
| <i>Mean age (yrs) (M/F)</i> | 53.6/57.2 | | 56.9/47.9 | |
| <i>Outcome alive (M/F)</i> | 45 | (27 + 14) | 59 | (31 + 28) |
| <i>dead (M/F)</i> | 35 | (24 + 11) | 14 | (11 + 3) |
| <i>Transplants (M/F)</i> | 15 | (11 + 4) | 5 | (2 + 3) |

Conclusions: HD and CAPD are equally utilized as RRT in Malta. Females comprise 38% of dialysis patients -: CAPD-treated females tend to be younger than their male counterparts. Diabetic nephropathy patients account for 26% of treated ESRF patients. CAPD technique failure rate is substantial, necessitating switch to haemodialysis. Transplantation rate is low - only 14% of the study group received an allograft. Mortality of ESRF patients is high - but better on CAPD (19%) than on HD (45%) - this may be due to selection bias.

MED III 07 R066

DIALYSIS ADEQUACY IN MALTESE END-STAGE RENAL FAILURE PATIENTS

Ian Galea, *A. Bugeja, E. Farrugia, Department of Medicine, St. Luke's Hospital, G'Mangia, Malta*

Numerous outcome studies have demonstrated a correlation between the delivered dose of dialysis and patient morbidity and mortality. Clinical signs and symptoms are not reliable indicators of dialysis adequacy. Using formal urea kinetic modelling, standardized measurements of delivered dialysis dose have been developed. The adequacy of intermittent haemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) in Malta has never been assessed. After training Renal Unit staff, most patients under our care attending the Renal Unit for

haemodialysis (n=36) and for chronic ambulatory peritoneal dialysis follow-up (n=25) were recruited. The adequacy of single dialysis sessions were regularly assessed (monthly for HD and 6-weekly for CAPD). Using established calculations, both native kidney and artificial urea clearances were measured to arrive at an index of total effective urea clearance. For each individual patient, dialysis schedule (HD timetable or CAPD regimen) was closely followed to arrive at a weekly index. The results are presented aside recommendations of the major nephrology bodies and discussed in the light of limited resources, cost-benefit ratios and the supreme need to *regularly* monitor adequacy.

MED III 08 (R075)

RENAL DISEASE IN MALTA: A RENAL BIOPSY UPDATE

Emanuel Farrugia, *Department of Medicine, St Luke's Hospital, G'Mangia, Malta*

Aim: To analyse the spectrum of renal disease in Malta and to update the renal biopsy database reported at the Second Maltese Medical School Conference in 1995.

Methods: In this study all 130 consecutive percutaneous renal biopsies performed by one physician, between 9/95 and 11/98 at St Luke's Hospital were retrospectively analysed. Pertinent clinical and laboratory data were abstracted. Histopathological examination of all biopsies utilizing light, immuno-peroxidase and electron microscopy were carried out at Southmead Hospital, Bristol. Comparisons with a similar study (114 biopsies) were made.

Results: 120 native and 10 allograft renal biopsies were performed in 126 patients (67 males and 59 females). At biopsy, mean age was 42.5 years (range 7 - 68) in males and 39.9 years (range 10 - 76) in females. Indications for biopsy were: Isolated Haematuria 22 (17%), Haemoproteinuria with normal renal function 51 (39%), Nephrotic-Range Proteinuria or Nephrotic Syndrome 12 (9%), Impaired Renal Function 35 (27%) and Renal Transplant dysfunction 10 (8%). Histopathological diagnoses in native biopsies were: IgA Nephropathy (n=20), Focal Segmental Glomerulosclerosis (n=19), Mesangial Proliferative Glomerulonephritis or Mesangial Deposits with normal light microscopy, not IgA disease (n=23); Lupus Nephritis (n=8), Hypertension/Arteriosclerosis (n=10), Vasculitis (n=5), Membranous Nephropathy (n=10), Thin GBM disease (n=5). Other pathology included diabetic nephropathy, tubulointerstitial nephritis, acute tubular necrosis, pre-eclampsia, amyloidosis, post infections nephritis, anti-GBM disease, end-stage kidney and normal tissue.

Conclusion: Nearly 71% of native renal biopsies are performed in patients who have a normal serum creatinine. The spectrum of glomerular pathology in Malta is similar to that observed in Western Europe and USA, with mesangial proliferation (IgA and non-IgA) accounting for 36% of native biopsies. Specific diagnoses of glomerular disease in Malta did not change during the two consecutive periods of study.

MED III 09 (R172)

RENAL TRANSPLANTATION – A WHOLLY MALTESE EXPERIENCE

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Renal transplantation is the established treatment modality for end stage renal failure. The first renal transplant in Malta was performed by a visiting team of foreign surgeons in 1983. British and Italian surgical teams continued this service until 1992. Since 1993, renal transplants in Malta have been performed by a dedicated Maltese team. The aim of this study was to analyse our results retrospectively to see whether these compare well with other more established centres of transplantation. During the period 1993 –1998, 42 renal transplants were carried out (41 cadaveric; 1 living

related) on 42 patients (30 haemodialysis; 12 CAPD). There was 1 post-operative death from non-surgical causes. 39 (93%) grafts had immediate function with a mean creatinine of 250 mmol/litre (range 59 – 759) at 5 days. 39 (93%) grafts were functioning at 3 months with a mean creatinine of 150 mmol/litre (range 100 – 300). 1 patient required graft nephrectomy on day 3 post surgery. 1 patient needed re-exploration for a urine leak which was successfully corrected. These results compare well with those reported from larger well established centres and justify the continuation of a renal transplant programme by local surgeons.

MED III 10 (R133)

XANTHOGRANULOMATOUS PYELONEPHRITIS: A REVIEW OF 33 CASES

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Purpose: To review the diagnostic features of 33 cases of histologically proven xanthogranulomatous pyelonephritis (XGP) and to determine the clinical and radiological parameters which contribute most to diagnosis.

Methods and Materials: A retrospective review of all cases of XGP diagnosed over a 8 year period (1990-1997) at our institution was performed. The demographic, clinical, laboratory and radiological features were reviewed in all patients.

Results: The mean patient age 52(range 16-85) and the F:M ratio 5.6:1 (28 women and five men). Of the 28 women 84% (16/19) had a history of multiple (>3) and a mean of 6 pregnancies. XGP was unilateral in 32 and bilateral in one case. The right kidney was affected in 65%(22/34) and the left kidney in 35% (12/34). The disease process was global in 73%(25/34) and focal in 27% (9/33). Clinical examination showed flank tenderness, fever, weight loss and a palpable renal mass in decreasing order of frequency. Laboratory data revealed an elevated WCC (>11Giga/l) in 70% and anaemia (<11g/l Hgb) in 64% of patients. KUB showed evidence of renal calcification in 84% (26/31), of which 72% (18/25) had staghorn formation. IVP and US were abnormal in all cases. CT was performed in 12 patients and showed the typical appearances of XGP in all patients.

Conclusions:

1. This review confirms the useful role of CT in the preoperative diagnosis of XGP.
2. In contrast to previous reported series, this study reveals a preponderance of rights-sided global disease in women with a history of multiple pregnancies.

SUR III 01 (R271)

THE NATURE OF EVIDENCE

A. Maran (*Abstract not available at time of going to press*)

SUR III 02 (R047)

FACTORS AFFECTING VESTIBULAR COMPENSATION

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The objectives of this clinical study were to study further the factors affecting the process of compensation following a unilateral peripheral vestibular lesion. Patients were diagnosed when

they presented to the neuro-otology clinic, and were reviewed at a follow-up appointment to look for improvement after performing the Cawthorne-Cooksey exercises. Vestibular exercises are the mainstay of treatment after the acute phase has passed following injury to the peripheral vestibular system (this includes the end organ of balance i.e. the vestibular labyrinth, or its nerve up to the root entry zone into the brainstem). The patient's symptoms, investigation results, psychological state, functional well-being, and other factors in the history which may be relevant to compensation were assessed at the onset of the study. We then tried to determine whether there is a relationship between these same factors i.e. age, visual acuity, proprioceptive threshold, vascular factors, psychological well-being, the method of performing vestibular exercises and the rate and extent of recovery and in an attempt to clarify better the clinical prognostic indicators for failure of recovery following peripheral vestibular dysfunction. We found that in our twenty-two subjects, less of the patients with the following criteria showed improvement than patients who were not in that group: (i) a greater degree of canal paresis (>8%) (ii) worse visual acuity (> 6/6) (iii) older patients (>45 years) (iv) a score of less than 100% for visual preference on posturography (v) a higher score for a 'multisensory dizziness' scale (vi) a higher score for handicap (measured by the Dizziness Handicap Inventory) (vii) a greater degree of bodily pain (self-reported in the Short Form 36) (viii) more depression and anxiety (ix) non-compliance with the vestibular exercises.

SUR III 03 (R255)

Endoscopic Sinus Surgery: early results in Malta

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Endoscopic sinus surgery is rapidly becoming the treatment of choice for chronic sinusitis resistant to medical therapy. As a minimal access technique it offers several advantages, including minimal in-patient stay and decreased postoperative morbidity. This paper describes the results of the first series in Malta using this technique.

SUR III 04 (R063)

LEG LENGTHENING

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The first seven cases of lower limb lengthening in Malta are presented. The technique of callotasis using an uni-axial external fixator described by DeBastiani was used. Slowing the growth of the longer limb via epiphyseal ablation or stapling had hitherto been performed to achieve leg equalization. Acute lengthening had been discarded due to the high reported incidence of serious complications including vascular occlusion leading to amputation.

Complications ranging from pin track infection to fracture after removal of the external fixator were treated and satisfactory lengthening was achieved.

SUR III 05 (R235)

SCOLIOSIS IN MALTA

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It is commonly believed that scoliosis is more prevalent in Malta compared to Western European countries. However, only data on the incidence of severe scoliosis is available up to now, and this is incomplete.

In this study, one thousand routine chest Xrays taken at St. Luke's Hospital in 1998 were reviewed to see the incidence of scoliosis in the general Maltese population, and also give the relative distribution between the sexes. The severity of the scoliosis was also looked at.

SUR III 06 (R237)

SPINAL INJURIES IN MALTA

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Thirtynine patients with varying levels of spinal cord injury attending in or out patient treatment at the Spinal Unit in Boffa Hospital were reviewed.

They were assessed according to the causative aetiology, the level and completeness of the injury, the presence of medical problems, their activities of daily living and whether they live at home or not, and their ability to drive and work.

The most common levels was C5/6. Thirty four were living at home (87%). 77% could feed themselves, while 66% could bathe themselves and 64% could dress on their own. Seventeen (43.5%) were in productive employment, and 23% were able to drive. These results show the effectiveness of the multidisciplinary rehabilitation team.

SUR III 07 (R238)

PEDICLE SCREW FIXATION IN MALTA - THE EARLY DAYS

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Pedicle screw fixation has become established as a means of improving the success of spinal fusion and also mobilising the patient faster. However some papers have quoted a complication rare of up to 33%.

The first six patients with pedicle screw fixation in Malta are presented, with a minimum follow up of 6 months. All had severe spinal stenosis, with walking distances of 50 - 100 metres, and coexisting spondylolisthesis. Extensive decompressions were carried out, and posterolateral fusions performed with pedicle screw stabilisation. Most patients had 2 levels with 6 screws.

At six months, all patients had achieved fusion. Walking distance varied from 1/2 - 2 miles.

There was resolution of leg pain in 4 out of 6, and major improvement in 2. Back pain was reduced. There was no post-operative weakness. These results are very encouraging.

POSTERS

BMS P01 (R121)

INTERLEUKIN 18 EXHIBITS ANTI-TUMOUR ACTIVITY IN A MOUSE MODEL OF MALIGNANT ASCITES. STUDIES ON THE IMMUNOLOGICAL MECHANISMS INVOLVED IN TUMOUR REJECTION

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Interleukin 18 (IL-18) is a cytokine which induces a T helper type 1 (Th 1) immune response and is therefore expected to favour cell-mediated immune responses *in vivo*. A preclinical study was devised to determine the effects of treating mice with IL-18 and injecting them peritoneally with Meth A sarcoma cells. Almost all of the mice receiving IL-18 survived tumour challenge whereas none of the control mice did. A polyclonal antibody, anti-asialo GM1 was used *in vivo* to deplete natural killer (NK) cells and correspondingly, the anti-tumour effect of IL-18 was abrogated. The treated mice which survived tumour challenge all rejected a second challenge of Meth A tumour but not an unrelated tumour indicating the induction of immune memory. *In vitro* assays revealed that the cells responsible for memory were CD4⁺ T cells because an antibody against these cells + complement could inhibit cytolytic activity against the tumour cells. Further experiments on the kinetics of the immune response showed that IL-18 could induce short-lived NK activity early after administration followed by a longer-lasting CTL response and immune memory. The timing of NK and CTL inductions appeared to be closely related to the cytokine network because *in vitro* studies on the spleen cells of treated and control mice indicated that certain cytokines such as IL-10 were produced when NK activity was high whereas IL-2 and IFN- γ were produced when CTL activity was induced. Our study therefore shows that the cytokine IL-18 can induce immunologically-mediated anti-tumour responses probably through specifically-acting cytokine networks.

BMS P02 (R093)

STEREOLOGICAL STUDY OF TISSUE COMPARTMENTS OF THE HUMAN SPLEEN

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Introduction: The spleen is composed of various compartments, populated with different lymphoid and non-lymphoid cells. No studies have been carried out previously using stereological methods to investigate the compartments of the human spleen.

Materials and methods: Ten spleens, surgically removed after traumatic injury, and eight spleens, surgically extirpated for treatment of early stage carcinoma or gastric ulcer, were studied. Paraffin-embedded tissue sections were either stained with haematoxylin and eosin or used for immuno-histochemical detection of T- and B- lymphocytes. The point-counting method was used to study the red pulp, perifollicular zone, white pulp (follicles, peri-arteriolar lymphatic sheath (PALS) and marginal zone) and connective tissue. Area density (number of follicles per mm² of tissue section), volume density (number of follicles per mm³ of tissue) and mean diameter (1) were determined. The mean values and standard deviation were calculated. Student's t-test was employed for comparing the means.

Results: The volume densities of the tissue compartments, and stereological parameters of lymphoid follicles, were similar in both groups of splenic samples, except for the volume densities of perifollicular zone and PALS which were larger in the trauma group.

Discussion: Our study provides new data on the volumes of different sub-compartments and on the stereological parameters of lymphoid follicles of the human spleen. The larger volumes of the perifollicular zone and PALS in the trauma group may reflect immune stimulation of the spleen, which could make this organ more susceptible to traumatic injury.

Acknowledgement: This work was done during the sabbatical of N.M. Milicevic and Z. Milicevic at the Department of Anatomy, University of Malta.

References: 1. Milicevic, Z et al., *Exp. Mol. Pathol.* 61, 77-81, 1994

BMS P03 (R214)

THE MOLECULAR EVOLUTION OF SUPEROXIDE DISMUTASE

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Oxygen radicals are of great importance in the pathophysiology of several disease states including autoimmune conditions, neurodegenerative disorders, ischaemic injury, toxin induced damage, external pulmonary insults, and haemolysis. The enzyme Superoxide Dismutase forms part of the first line of defense against the deleterious free radical cascade. This protein has been given particular attention following reports supporting the therapeutic benefit of increasing the concentration of the enzyme at the site of injury, either via physical administration, or by gene therapy.

At the Department of Physiology and Biochemistry, we are tracing the evolutionary path of the enzyme, with a view to elucidating the basic principles of its protein structure and function. Molecular evolution techniques give us an insight into the natural protein engineering process, by inferring evolutionary relationships between similar proteins in different organisms.

A preliminary report of results so far will be outlined, and implications discussed.

Acknowledgements: The author acknowledges the support of Professor William Bannister, Drs Gary and Therese Hunter, and the Department of Physiology and Biochemistry.

BMS P04 (R258)

ACTIVE SITE ANATOMY IN IRON AND MANGANESE SUPEROXIDE DISMUTASES.

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The highly homologous iron and manganese superoxide dismutases (FeSOD and MnSOD respectively), exhibit an unusual specificity for their prosthetic metal ion. Each SOD requires its specific metal cofactor for activity. Each SOD contains a highly conserved active-site glutamine residue which projects toward the metal centre and hydrogen bonds with the conserved tyrosine, Y34. However, the position of this residue is different for each isoenzyme. In *Escherichia coli* FeSOD this residue (Q69) is located in helix 3, whereas in *E.coli* MnSOD this residue (Q146) is located in loop 8. This spatial relationship is conserved in all other FeSODs and MnSODs examined. To test whether this arrangement contributes to the metal specificity of the SODs of *E.coli*, we have used site-directed mutagenesis to effectively remove the existing glutamine residue (FeSOD[Q69G] and MnSOD[Q146A]), introduce a new glutamine residue (FeSOD[A141Q] and MnSOD[G77Q]) or both (FeSOD[Q69G, A141Q] and MnSOD[Q146A,

G77Q]). With respect to the positioning of the glutamine residue, the sequence of the FeSOD double mutant mimics that of wild-type MnSOD whilst the MnSOD double mutant mimics that of wild-type FeSOD. The SODs were mutated and purified via a GST-fusion protein intermediate using a single, novel expression vector developed in our laboratory. Biochemical characterisation of these mutants reveals distinctive properties but indicates that this amino acid arrangement alone does not determine metal cofactor specificity.

BMS P05 (R181)

A COMBINATION OF FISH AND Hb F IMMUNO-FLUORESCENCE STAINING FOR THE NON-INVASIVE PRENATAL DIAGNOSIS OF FETAL ANEUPLOIDIES

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Fluorescence *in-situ* hybridisation (FISH), although already used for non-invasive prenatal diagnosis from maternal blood, has significant shortcomings - numerous cells need to be scanned, cellular morphology is difficult to identify and preparatory enrichment steps may disrupt identification processes. The aim of this work was to intercalate Hb F immuno-fluorescence staining between the enrichment and the hybridisation steps. This would greatly facilitate scanning of the slides and would restrict target cells to nucleated red blood cells (NRBCs) that are ideal for prenatal diagnosis from maternal blood. The efficiency of Hb F as a fetal cell marker was also investigated.

Method: Blood was obtained from twenty-one healthy pregnant women at different gestational ages attending ante-natal visits. Six of the mothers carrying a male fetus had fetal sex confirmed by an invasive procedure after blood letting. The blood samples were enriched using magnetic cell sorting. The sorted fraction was then immuno-fluorescently stained for Hb F. The six 'male' samples were split and subjected to FISH alone or Hb F immuno-fluorescence staining followed by FISH. FISH was done using X & Y DNA probes.

Results: NRBCs were identified in 11 of 15 samples subjected to Hb F staining only. Numbers ranged from 0.2 - 2.8 cells per 2000 nucleated cells. When the combination protocol was used, there were fewer Hb F staining cells than before meaning that some of the cells had been 'lost'. In the split samples, 10 fetal NRBCs in 4 pregnancies were identified compared to 9 fetal nucleated cells from 3 pregnancies when only FISH was performed.

Conclusion: A combination of immuno-fluorescence staining and hybridisation was possible with some reduction of efficiency of either detection technique. Hb F staining made scanning much easier, reducing uninformative cases and restricted evaluation to NRBCs. Also Hb F staining proved to be a reliable fetal cell marker and could be used in pregnancies with female fetuses. FISH could also be performed using other probes, e.g. 13, 18 & 21, for the non-invasive prenatal diagnosis of other fetal aneuploidies.

BMS P06 (R180)

Hb F IMMUNO-FLUORESCENCE STAINING AS A SPECIFIC FETAL CELL MARKER FOR FETAL CELL ISOLATION FROM MATERNAL BLOOD

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Non-invasive, risk free prenatal diagnosis has long been sought. One of the major problems faced in the endeavour is the absence of a fetal specific cell marker. Fetal red blood cells (RBCs) contain high

quantities of haemoglobin F (Hb F) while maternal RBCs contain minimal amounts. The aim was to investigate whether immuno-fluorescence staining of Hb F could be used to distinguish between the two.

Methods: Blood was obtained from fifty-six healthy pregnant women at different gestational ages attending ante-natal visits. Blood from healthy non-pregnant females and cord blood obtained at delivery of term infants were used as controls. Model systems were created by mixing compatible samples of control bloods in different ratios. Immuno-fluorescence staining of Hb F was done on whole blood and subjected to flow cytometric analysis

Results: Staining intensity clearly differentiated cord from adult RBCs. The model systems established the sensitivity of the system to be between 1:1000 - 1:10,000 cord RBCs spiked into adult blood. In the maternal blood samples, 2 populations of cells were identified - a mildly staining group likely to be of maternal origin and an intensely staining group that are probably of fetal origin. Hb F increased in pregnancy and peaked in the mid-trimester and the early third trimester. The number of fetal cells was very low throughout but showed a small rise between 22nd and 32nd week of gestation.

Conclusion: Hb F immuno-fluorescence staining and flow cytometric analysis permitted the identification of fetal cells in an overwhelming background of maternal cells. The number of fetal cells was however very small. Investigating whole blood eliminated the risk of target cell loss during the preparatory steps and reflect true feto-maternal relationships. Sensitive, high speed, automated scanning systems would allow the identification of fetal Hb F positive nucleated cells which can then be used for prenatal diagnosis.

BMS P07 R206

HAEMOGLOBINOPATHIES IN LIBYA

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The aim of this study was to evaluate the prevalence of different types of abnormal haemoglobins and thalassaemia in the population of Tripoli, and the Western and Southern regions of Libya. Nine hundred and eighty five new-born babies from Tripoli were tested, none of which had Hb Bart's, indicating that α -thalassaemia is absent or extremely rare. Abnormal Hb zones were noted in 10 samples (=1.0%). Some of these were sickle cell trait, Hb C, Hb Setif, and Hb F Malta I. Among the 866 pregnant women tested, 14 (=1.6%) had an abnormal Hb, including Hb S, Hb C and others. A total of 2595 Libyans from the Western and Southern regions of Libya were also investigated for abnormal haemoglobins. Out of these samples tested, 1.6% had Hb AS, 0.72% had Hb AC, 0.08% had Hb CC, 0.04% had Hb Sc, 1.3% had HPFH and 0.16% had Hb AX. We also determined the type of β thalassaemia mutations among the 25 subjects from Tripoli area. Among these, 13 patients were β -thalassaemia homozygotes and 12 were thalassaemia heterozygotes. Three types of mutations which are very common in the Mediterranean area were characterized. These are β^+ IVS-1,6 (T \rightarrow C), β^+ IVS-I, 110 (G \rightarrow A) and β^0 CD39 (C \rightarrow T). These investigations were most useful to establish the epidemiology of haemoglobin disorders for early detection and treatment which are necessary for better prognosis.

BMS P08 (R209)

TRANSIENT ALTERATIONS OF NITRIC OXIDE, CEREBRAL BLOOD FLOW AND SPREADING CORTICAL DEPRESSION: RELATIONSHIP TO DAMAGE IN THE ISCHEMIC PENUMBRA ?

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Cortical tissue surrounding the core of cerebral focal ischemia undergoes repetitive spontaneous depolarizations and transient depolarizations may occur repeatedly in zones bordering the core of the ischemic focus. It has been hypothesized that the gradual recruitment of damaged cells in these zones

(ischemic penumbra) may result from these repeated depolarizations. They share many similarities to spreading depression (SD), a phenomenon described first by Leão (1944) such as breakdown of membrane ion homeostasis including Ca^{2+} influx and wave-like propagation. Recovery of SDs from depolarization is paralleled by an increase of regional blood flow (CBF) which may compensate for the metabolic demand required for the reestablishment of ion homeostasis. During ischemic transient depolarizations, the transient increase in CBF is less pronounced or missing. Since Nitric oxide (NO) synthesis may be involved in the described blood flow response, we tested for the first time whether tissue NO increases during 'normal' SDs, ie: non ischemic transient depolarizations that can be elicited by a number of different stimuli eg: electrically or by local application of high K^+ .

Proximal middle cerebral artery occlusion was employed for induction of focal cerebral ischemia in α -chloralose anesthetized cats. Laser Doppler flow probes, ion-selective microelectrodes and NO electrodes measured CBF, direct current (DC) potential and extracellular concentrations of Ca^{2+} and NO at 2-3 sites in two gyri of the cerebral cortex (gyrus ectosylvius and suprasylvius) positioned at specific stereotactic coordinates.

In the current experiments, we demonstrate topographic and chronological profiles of the cortical DC potential, and the extracellular Ca^{2+} and NO concentrations in relation to topographically graded CBF reduction in an ischemic focus. This is the first study to describe transient NO responses accompanying cortical SD. Since the speed of wave propagation for the three measured variables was almost the same, we assume that the three transient responses were correlates of the same spatiotemporal process of SD. Relatively fast increases of NO compared particularly to slower CBF elevations and may thus provide a hint for an involvement of NO synthase activation in compensatory CBF responses. However, it needs to be tested whether ischemic transient depolarizations show similar characteristics.

BMS P09 (R212)

A COMPARATIVE STUDY OF THE ANALYSIS OF WATER AND FAT: SOLUBLE VITAMINS AND ANTIBIOTICS IN VETERINARY PRODUCTS BY HPLC AND CE

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Both water and fat-soluble vitamins are commonly used in animal feeds. The majority of vitamin determinations are currently performed by HPLC with UV detection. Reports have shown that capillary electrophoresis (CE) methods have been successfully validated with regards to vitamin analysis in pharmaceuticals. The role of CE in the analysis of veterinary products has been studied. Preliminary work has also been carried out with serum samples in the course of vitamin

determinations. The potential benefits of adopting CE for clinical determinations are the reduced analysis times, as well as simpler sample pre-treatment: CE samples require a dilution and centrifugation, whilst the HPLC sample pre-treatment involves a longer and more elaborate liquid-liquid extraction procedure.

BMS P10 (R250)

CANCER GENETICS – MUTATION TESTING AND BASIC RESEARCH

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Cancer is primarily a genetic disease, arising from an accumulation of mutations that promote clonal selection of cells with increasingly aggressive behaviour. The vast majority of mutations in cancer are somatic; however, about 5-10% of all cancers arise in individuals who have inherited an altered form of a single gene. The discovery of these specific genes, whose alteration dramatically increases an individual's risk of cancer, is a landmark in human medical science. Indeed, tests for hereditary predisposition to cancer are becoming increasingly available. Where the predisposing mutation is known, and there is a clinical decision to be based on the information, genetic testing is likely to be helpful. In Europe, cancer genetic services that provide pre-symptomatic cancer risk assessment and management are well-established in countries such as the UK, France, Germany, the Netherlands and Italy. Countries with active development include Austria, Switzerland and most Eastern European countries,

In Malta, one of the projects underway at the Biomedical Sciences Department is, in fact, aimed at developing an expression system in the eukaryotic *Saccharomyces cerevisiae* which will detect protein-truncating mutations in candidate genes. The first gene to be tested is the adenomatous polyposis coli (*APC*) gene, responsible for Familial Adenomatous Polyposis (FAP). Basically, PCR-amplified fragments from the APC gene will be cloned into a vector designed to express a colorimetric marker gene in *S. cerevisiae*. The assay system is predicted to be reliable, but at the same time, simpler to perform and less time-consuming than current established methods. The project is also aimed at allowing us to provide mutation testing and counselling for individuals from FAP families. The system can be readily modified and used as a protein-truncation test for other genes, namely the breast cancer genes *BRCA1* and *BRCA2*.

Another related project being carried out in the department is that on mechanisms of colorectal tumorigenesis, namely the influence of drugs such as aspirin to inhibit cellular proliferation and/or apoptosis. This is a very promising and interesting area of research.

BMS P11 (R211)

THE REMEDI - A DIAGNOSTIC TOOL FOR ILLICIT DRUG IDENTIFICATION

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The Rapid EMERGENCY Drug Identification system is an automated drug-profiling system that employs high-performance liquid chromatography with a multi-column design. It has previously proven successful overseas in emergency toxicology situations and in the clinical analysis of urine and serum. In Malta the REMEDI has been employed in illicit drug screening in prisons and drug rehabilitation centers.

Its capabilities include the broad spectrum identification of more than 700 basic, neutral and slightly acidic drugs and metabolites. Forensic applications, including analysis of whole blood

and tissue, have also been investigated overseas and has proven to be a useful complimentary tool for screening forensic cases. Sample preparation is simple and sample analysis time is less than 15 minutes.

ONC P01 (R137)

SQUAMOUS CELL CARCINOMA OF WALDEYER'S CIRCUIT TREATED IN 1991-1995 AT ENT CLINIC IN BRNO (A RETROSPECTIVE STUDY)

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A retrospective study of a set of patients with squamous cell carcinomas of Waldeyer's circuit treated in years 1991-1995 at ENT Clinic in Brno was made. The set involved 84 patients, 13 out of them with supraglottic laryngeal cancer and 71 with pharyngeal cancer. This study results in the evaluation of our treatment algorithm and its possible optimisation.

Our therapeutical algorithm in carcinomas of Waldeyer's circuit involves one cycle of neoadjuvant chemotherapy (usually Vinblastin, Methotrexat, Cycloplatinum, Cyclophosphamid) followed by a surgical treatment with successive irradiation and longer-lasting adjuvant chemotherapy. Neoadjuvant chemotherapy was not applied in 19% patients. Radical neck dissection was performed in 61%, palliative surgery in 9%, without surgery 8% of patients. Surgical treatment was followed by successive irradiation (teleradiotherapy 50 to 60 Gy). Adjuvant chemotherapy was applied in 58% of patients. The quality of life was evaluated according to Karnofski index: 49% of patients had 70, 14% 60, and 13% 80. Three-year survival was: 36% of patients in complete remission, 11% in partial remission, 14% in generalisation, 27% died and 12% lost from our evidence. The results are comparable with other literary evidence.

ONC P02 (R158)

THE INCIDENCE OF CHILDHOOD CANCERS IN MALTA.

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Background: Cancer is a rare childhood affliction but with the reduction in deaths from other more common diseases paediatric cancer is now one of the commonest causes of death and morbidity in the paediatric population. The incidence of the various cancers that affect the Maltese paediatric population is not yet known.

Methods: Data from the cancer registry was obtained and the incidence of the different paediatric cancers was worked out.

Findings: The incidence data will be presented as a bar graph and a comparison with data from other countries will be made.

ONC P03 (R083)

TUMOUR STAGING AND HISTOLOGY OF FEMALE BREAST CANCER IN MALTESE PATIENTS

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Female breast cancer is the most commonly registered cancer in Maltese women. It is almost the most common cancer death in females in the Maltese Islands. About 200 women are registered

each year with newly diagnosed breast cancer, while about 100 deaths in Maltese females are attributed to breast cancer annually.

This study has looked into the new cases registered with this cancer between 1996 and 1998 and established the stage at diagnosis of their tumours. The Tumour Node Metastasis (TNM) system was used. This was performed by review of the cases' histology reports, cancer registration forms and their medical and radiotherapy notes. This information will be presented and comparisons with similar studies performed on other populations of breast cancer cases will also be shown. Review of the histology reports of these cases also enabled us to extract information on the histological types and differentiation of these tumours and this data will be presented.

PAT P01 (R013)

TRENDS IN THE ISOLATION OF YEAST SPECIES FROM CLINICAL SPECIMENS

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The principal aims of this study were to determine the frequency of isolation of yeast species from clinical specimens and to test the isolated yeast strains to the common antifungal drugs in clinical practice. Clinical specimens were sent from the main hospitals and health centres in the Maltese Islands. Specimen processing and identification of fungal isolates were carried out using standard methods. Antifungal tests were performed using the ATB F kit (bioMérieux). Various yeast species (n = 1462) were cultured from 1545 clinical specimens submitted from 1198 patients. As expected, the predominant yeast was *Candida albicans* (n = 721), followed by *C. tropicalis* (n = 306), *C. glabrata* (n = 243), *C. parapsilosis* (n = 113), *C. krusei* (n = 22) and *C. lipolytica* (n = 5). Other yeast species included *Cryptococcus albidus*, *Rhodotorula rubra*, *R. glutinis*, *R. minuta* and *Trichosporon cutaneum*. *Candida albicans* was the commonest yeast isolated from blood cultures, catheter tips, pus, sputum, stools and bronchial lavages. However, the principal yeast cultivated from urine specimens was *Candida tropicalis*, whilst *Candida parapsilosis* was primarily isolated from ear swab specimens. The majority of the yeasts were sensitive to amphotericin B, nystatin, 5-fluorocytosine, ketoconazole, econazole and miconazole. However, there were a few strains with *in vitro* resistance to amphotericin B (MIC > 8 mg/L), 5-fluorocytosine (MIC > 128 mg/L) and the azole drugs (MIC > 8 mg/L) tested. Additionally, some isolates, notably *C. krusei* and *C. tropicalis* showed intermediate sensitivity to nystatin (MIC > 4 mg/L). Due to the known differences in the susceptibility pattern of yeasts to certain antifungal drugs, the changes in the frequency and distribution of *Candida* species with time are of interest.

PAT P02 (R014)

A SURVEY ON FUNGAL INFECTIONS IN MALTA

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A postal survey, using a self-administered questionnaire, was conducted in 1996 amongst 200 randomly selected medical practitioners practising in Malta. The main aims were to establish the extent of awareness and experience with fungal infections and to analyse the different approaches to management. The response rate amounted to 37% (n = 74) but only 64 questionnaires were

valid. Only 5 doctors diagnosed more than 31 cases per month, with the majority (56%) seeing about 10 cases of fungal infections per month. The majority (75%) considered summer to be the season in which fungal infections predominate and nearly all doctors (92%) classified most fungal infections to be of minor importance. Exposed skin infections were ranked as most common (59%), followed by genital (14%) and nail infections (11%). Females were considered as more susceptible to fungal infections than males. Only 6% of doctors send a sample to a laboratory and prescribe antifungal therapy whilst awaiting results; the majority (90%), prescribe therapy without laboratory investigations. The most commonly used antifungal drugs are topical clotrimazole (23%), topical miconazole (22%) and isoconazole (14%). Nystatin, terbinafine, econazole, ketoconazole and griseofulvin are used less frequently as first line drugs whilst itraconazole is mostly used as second choice therapy. As dosage forms, creams were preferred (67%) followed by ointment formulations (19%). Up to 63% of medical practitioners rarely refer suspected cases of fungal infection for further investigations, such as, to St. Luke's Hospital or Sir Boffa Hospital. However, about 36% sometimes refer patients, especially when it does not respond to first line therapy. Moreover, since 1996, more medical practitioners are opting to use the laboratory services before prescribing therapy.

PAT P03 (R086)

PARTICIPATION IN THE PALM INTERNATIONAL SURVEY ON ANTIMICROBIAL SENSITIVITY

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During 1996 and 1997, the Bacteriology Laboratory of St. Luke's Hospital participated in the Pan-African Link with Microbiology (PALM) project, a multi-centre survey in conjunction with 8 other centres in Mediterranean and African localities in order to determine the variation of antibiotic sensitivities in these regions. Minimum inhibitory concentration (MIC) analyses using E-test methodology was performed against a total of 900 isolates namely *E.coli*, *Proteus mirabilis* and *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Enterococcus species*, *Klebsiella pneumoniae*, *Streptococcus pneumoniae*, *Staphylococcus aureus*, and *Haemophilus influenzae* retrieved from blood, urine, sputum or swab specimens sent to the Bacteriology Laboratory from hospital and community origins. Antimicrobial sensitivity evaluation of the patterns obtained indicates a moderate level of resistance among all the isolated strain types. All type of strains showed remarkable sensitivity patterns to antimicrobials that are commonly administered. As regards *Streptococcus pneumoniae* no Drug Resistant (DRSP) strains were found.

SUR P01 (R088)

AN UNUSUAL CAUSE OF HALITOSIS

Adrian M. Agius, P. Vassallo. St Philip's Hospital, St. Venera, Malta

Halitosis is usually associated with dental, sinus or upper gastrointestinal disorders.

A 25-year-old lady with longstanding halitosis was noted to have a suspicious lesion in the right nasal cavity. A CT scan was carried out in view of previous dental implants in her upper jaw. A mass in the right nasal cavity was noted, together with asymmetry of the nasal cavities, the right being much wider than the left.

At operation the mass turned out to be a foreign body, which had lain in the nasal cavity for a considerable number of years.

The commoner foreign bodies in the upper aerodigestive tract are described and discussed.

SUR P02 (R091)

PERCUTANEUS CBD (COMMON BILE DUCT) STONE REMOVAL VIA T-TUBE

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On routine T-tube cholangiogram after Cholecistectomy and CBD exploration in a 75-year-old female P.S. a residual stone, size 1cm was detected.

Three unsuccessful ERCP procedures were performed and after the third one a decision was taken to remove the stone percutaneously via T-drain tube.

Through the 6mm size T-tube cholangiogram was performed and the position of the stone in the lower CBD was located.

Dilatation to 12F was performed with percutaneous dilators.

The removal of the stone was carried out with a Dormia basket inserted over an unusual size Cobra catheter 8F.

In this case report we would like to point out that:

- This is the first such procedure carried out in Maltese hospitals
- It was done with a very small sized catheter
- There were no complications such as residual stones, bleeding and perforation.
- The procedure was short (20 min) and the patient was discharged home the day after.

SUR P03 (R090)

INVERTED PAPILLOMA OF THE URINARY BLADDER: CASE REPORT

Predrag Andrejevic, *Department of Surgery, St. Luke's Hospital, G'Mangia, Malta*

Inverted papilloma of the urinary bladder is an uncommon neoplasm, affecting predominantly males. The average age of presentation is 57 years.

It is a benign lesion of a considerable size, located predominantly at the trigone. Recurrence is common.

Sufficient treatment is endoscopic resection, followed by regular endoscopic check ups.

To our knowledge, this is the first case report in Malta.

SUR P04 (R239)

OLECRANON FRACTURES AND OSTEOGENESIS IMPERFECTA IN CHILDREN

James N. Casha, *Department of Orthopaedics, University of Dundee, Scotland*

Olecranon fractures in children are the rarest form of epiphyseal detachment, with only 16 cases in the recent English Literature. There has only been one other series in the literature with this injury in children with osteogenesis imperfecta. Here, four children with Type I osteogenesis imperfecta are presented. They had six olecranon fractures between them, treated by seven tension band wirings. The mean age was 12 years. One patient was diagnosed as osteogenesis imperfecta only after his injury.

There is a probable association between osteogenesis imperfecta and olecranon apophyseal injury, and mild osteogenesis imperfecta should be considered in patients presenting with this rare injury.

SUR P05 (R241)

BILATERAL AMPUTATIONS IN TAYSIDE.

James N. Casha, A.S. Jain, C.P.U. Stewart. Dundee Limb Fitting Center, Dundee, Scotland

Out of 1805 consecutive patients treated at the Dundee Limb Fitting Centre, 321 patients had bilateral major lower limb amputations (17.8%). This is the largest series of bilateral amputees in the world literature. 47.7% were bilateral transtibial, and 20.6% bilateral transfemoral.

It was noted that patients with a previous transtibial amputation tended to have another transtibial amputation, while those with a transfemoral amputation tended to have another transfemoral. Bilateral amputees were significantly younger than single amputees. Most had peripheral vascular disease with or without diabetes. The prosthetic fitment rate among bilateral transtibials was 86%, with a 30 day mortality of only 3.5% and a return home rate of 76.0%; which are excellent compared to the world literature.

SUR P06 (R236)

RECURRENT GAS CONTAINING DISC HERNIATIONS

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There are no cases of recurrent gas containing disc herniations in the literature, and primary ones have not been extensively described in the literature. The first cases were described by Austin in 1982, and there are only 50 cases in the literature, with the largest series, of 19 patients, by Hidalgo Ovejero.

However, the presence of gas in the intervertebral disc- the "Vacuum Phenomenon" - is widely known, being first described in 1937, and is present in 20.8% of asymptomatic patients on simple radiology (Gulati 1980) and 46% of patients on CT (Larde 1982).

We present two patients with gas-containing disc herniations with CT Myelogram diagnosis preoperatively, which were confirmed by the operative findings of nerve root compression by a bubble of disc material containing gas.

Post operatively both had relief of leg pain for about a month. In both cases, radicular symptoms returned suddenly, and repeat CT Myelography showed large recurrent gas-containing disc herniations. Both cases were re-operated, and gas under pressure was released from the disc herniations.

Our patients were elderly and on steroids as possible predisposing factors.

We feel that intrahernial gas is more common than suggested in the literature and recurrence is possible as discectomy does not remove disc degeneration and the vacuum phenomenon.

SUR P07 R105

OUR EXPERIENCES WITH HEMICALLOTASIS

Anthony Bernard, I. Molnar. Department of Orthopaedic Surgery, St. Luke's Hospital, G'Mangia, Malta

A poster presenting the procedure and results of two cases of tibial hemicallotasis performed for varus deformity of the knee and one case of femoral hemicallotasis performed for valgus deformity of the knee using orthofix external fixator.

SUR P08 (R087)

RAMSAY HUNT SYNDROME AND CRANIAL POLYNEUROPATHY

Adrian M. Agius, St Philip's Hospital, St. Venera, Malta

Ramsay Hunt syndrome is the name given to the condition of facial palsy associated with herpes zoster oticus.

The not uncommon entity presents the practitioner with a potentially treatable cause of facial nerve palsy. In the four case reports discussed below symptoms are diverse and include palsy of

one to several cranial nerves. Herpetic vesicles around the pinna are an important clue to the diagnosis of this condition.

Prompt antiviral therapy has been shown to improve prognosis but outcome is not as good as with idiopathic (or Bell's) palsy.

SUR P09 R162

THE BURNS UNIT, ST LUKE'S HOSPITAL - TEN YEARS ON AND GOING STRONG

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The Burns Unit at St Luke's Hospital started to function on 6th March 1989. The Unit is thus celebrating its tenth anniversary. During this time, the management of burns has changed from the open to the closed method of treatment and such cases are no longer treated in general surgical wards. The overall incidence of burns has decreased due to improved education of the general public. The patterns of injury have also changed as the majority of paediatric burns and scalds occur in a domestic environment whereas more adult cases are due to industrial accidents. In recent years, the workload in the Unit has increased dramatically with the expansion of Plastic Surgery services. This coincided with the return to Malta of two Plastic Surgeons in 1994 and 1997. The theatre facilities within the Burns Unit are used regularly for both Burns and Plastic Surgery cases. Currently, the majority of Plastic Surgery cases treated at St Luke's undergo surgery in this theatre. There is also a busy out-patient dressing clinic held on a daily basis within the Unit. A summary of the overall workload over the last ten years is presented, together with a review of the expansion in the type of cases seen and treated in the Unit. This correlates with the development of Plastic Surgery as an independent specialty at St Luke's.

MED P01 (R033)

REVIEW OF NEEDLESTICK INJURIES IN ST. LUKE'S HOSPITAL - MALTA

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Needlestick injuries remain the most important events which predispose healthcare workers to acquire blood borne infections. Injuries reported to the Infection Control Unit of St. Luke's Hospital in the period April 1997 to November 1998 were analysed. A total of 140 incidents were recorded including three from hepatitis C positive donors. The most significant risk factors for medical officers and nurses were venepuncture & resheathing of used devices whilst inoculation from wayward and improperly disposed needles were responsible for practically all injuries to cleaners. A substantial lack of compliance with recommended protocols on the use of sharps containers was also evident. In addition, 38% of individuals had not completed a full course of hepatitis B vaccination at the time of the incident whilst 27% did not seek help until after 12 hours from exposure, factors increasing the risk of infection if the donor had been HBV or HIV positive. Increased compliance with current policies on correct sharps disposal and prompt reporting of injuries should reduce the risk of nosocomially acquired blood borne infections in health care workers within St. Luke's Hospital.

MED P02 (R167)

BRUCELLOSIS IN MALTA – AN IMPROVED STRATEGY FOR CONTROL

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A recent outbreak of human brucellosis in Malta stimulated considerable concern to the authorities regarding its control. The prevalence of brucellosis has generally declined, however, it remains endemic in spite of an intensive national veterinary testing and slaughtering programme. During 1995 and early 1996 at least 235 cases of human infection and one death due to complications, were associated with the consumption of raw fresh cheeselets. The *gbejniet* are still traditionally made from unpasteurised milk. A revised course of action, which included the preparation of new legislation, was proposed and initiated by an *ad hoc* committee.

This paper deals with various aspects of human and animal brucellosis and approaches to its control. It includes an epidemiological study of the recent outbreak together with a review of similar experiences in other countries. Development of local strategy is outlined and discussed. Eradication of brucellosis in the Maltese Islands is an achievable goal. Although this outbreak has been a source of socio-economic loss, it may well have been the turning point towards final disease eradication.

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MED P03 (R096)

PREDICTIVE GENE TESTING FOR HUNTINGTON'S DISEASE IN MALTA.

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Background and Objectives: Since the discovery of the gene for Huntington's Disease (HD) in 1993, predictive testing was greatly facilitated by direct DNA analysis obviating the need for extensive family studies by linkage analysis. In Malta the Neurogenetics Clinic embarked on a programme of predictive testing for HD in 1993. The aim of this study is to assess the responses of at risk individuals to predictive testing in Malta.

Methods: Relatives of affected individuals were given genetic counselling. Those who wished to undergo predictive testing were given psychological counselling before proceeding with the DNA test. The counselling protocol included assessment of the individual's motivation for taking the test, their attitudes towards possible positive and negative outcomes and self-evaluation of the counselee's psychological status using the Beck's Hopelessness scale, the state trait and anxiety inventories (Spielberger) and a social support questionnaire.

Results: A total of 62 affected individuals from 44 nuclear families have been identified giving a prevalence of 17.2 per 100,000 population, which is higher than that of other European countries where it ranges from 5 to 12 per 100,000. Attitudes towards testing were variable. Most young, unmarried individuals who turned up for counselling opted to take the test to be in a better position to take decisions regarding marriage and having children. Those who were engaged with a view to marriage usually involved their fiancées in the counselling. Most older individuals, who already had a family felt that testing would increase their worries and preferred to face the disease when and if it affected them; others opted to be tested to elucidate their children's risks to their children.

Conclusions: Predictive testing provided definitive information regarding genetic status with tremendous implications to the individual. Most at risk individuals adopt responsible attitudes towards predictive testing.

MED P04 (R151)

AN ASSESSMENT OF POPULATION KINETIC SOFTWARE FOR ANTIEPILEPTIC DRUGS IN A CLINICAL OUTPATIENT SETTING

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The availability of software packages for the estimation of population kinetics permits the rapid determination of appropriate individualised drug dosing using sparse data. Although the use of these packages is well established in clinical trials, their use in actual clinical practice has been inconsistent, primarily due to prescribers' reluctance to accept these novel programmes and persistent practice of using target serum concentrations as therapeutic endpoints and decision thresholds. In this study the predictive powers and advantages of a commercial software kinetic package in clinical situations was evaluated ambulatory patients on anti-epileptic therapy (sodium valproate and phenytoin). This package, which was based on bayesian estimation and able to handle complex multidose regimens, fitting of clinical data and simulations. Patient-specific characteristics, such as pathophysiological variables and concomitant therapy, demographic data and laboratory data were inputted. The achievement of drug target concentrations in these two groups of patients was compared to that of control patients, whose dose changes were made arbitrarily and not handled by the software. The package was able to predict serum concentrations for both drugs with notable accuracy and drug target levels were achieved in a statistically significantly shorter time ($p > 0.05$) without resorting to excessive invasive serum levels determination.

MED P05 (R152)

PHARMACOLOGY OF DRUG ENANTIOMERS INDICATED IN ABSENCE SEIZURES

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Absence seizures are a form of generalised epilepsy. Ethosuximide (ESM) is the drug of choice in absence seizures. It is a chiral drug used clinically as the racemate. In this study, a chiral gas chromatographic separation technique coupled with mass spectrometry was used for the first time for the identification of chiral metabolites of ESM in humans. A previous study had been carried out in rats. The objectives of the study were to investigate the chiral nature of the metabolites of ESM in humans and the possibility of glucuronide conjugation to determine whether or any stereoselective in the renal excretion of ESM exists in humans and to investigate the interspecies difference between humans and rats. The major metabolites were identified to be 2-ethyl-3-hydroxy-2-methylsuccinimide and 2-(1-hydroxyethyl)-2-methyl succinimide which both possess chiral centres. The majority of the TIC chromatograms were characterised by the same two peaks for metabolite III and 3 peaks for metabolite II. In 5 subjects the peak area ratios of the beta-glucuronidase treated samples were higher than the peaks obtained from the untreated ones. The (S)-enantiomer of ESM was found to be preferentially excreted in urine. This study showed that the stereoselective patterns in the renal excretion of ESM are similar in rats and humans.

MED P07 (R109)

DIABETIC KETOACIDOSIS IN TYPE II DIABETES MELLITUS?

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Diabetic ketoacidosis is a condition usually assumed to occur in type I diabetes mellitus. Discharge summaries were used to identify patients admitted with diabetic ketoacidosis (DKA) under our care. Eleven type II diabetes patients (8 women, 3 men) admitted with DKA were compared with 20 type I patients (12 women, 8 men). The mean age of type II patients was significantly higher, 61.0 ± 12.3 years compared to 38.0 ± 20.5 (mean \pm 1SD; $p < 0.001$). The duration of diabetes was longer for patients with type II diabetes, 17.6 ± 14.8 compared with 8.3 ± 8.2 years ($p < 0.001$). Mean duration of illness before hospitalisation was longer in type II patients (4.3 ± 2.6 , 2.2 ± 2.1 days; $p < 0.01$) but the duration of hospitalisation was the same 7.3 ± 5.4 compared to 7.0 ± 14.5 days. Three patients with Type II diabetes (one on insulin) had omitted their medication compared with 2 type I patients. Seven type I patients were newly diagnosed and presented with DKA. This was the first admission with DKA for 10 type II patients compared with 14 type I patients. All patients were discharged on insulin. DKA can occur in type II diabetes and should be remembered in the differential diagnosis of any ill diabetic patient.

MED P08 (R028)

ADULT HEIGHT AND PROTEINURIA IN TYPE 2 DIABETES

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Objective of the study was to investigate the relationship between final adult height and macroproteinuria in type 2 diabetic patients. **RESEARCH DESIGN AND METHODS:**— One hundred and fourteen consecutive type 2 diabetic patients (70 males, 44 females) with macroproteinuria were recruited into the study. For every patient 3 diabetic controls that were matched for age, gender and duration of diabetes were randomly selected. Height was measured in patients and controls to the nearest cm. **RESULTS:**— The mean height in men with macroproteinuria ($n=70$) was 164.0cm (standard deviation, sd, = 6.84) compared to 166.7cm (sd= 6.56) in controls ($n=210$) ($p < 0.004$). The mean height in women with macroproteinuria ($n=44$) was 151.1cm (sd= 5.77) compared to 152.3cm (sd= 5.19) in controls ($n=132$) ($p=0.22$, not statistically significant). **In conclusion,** Short stature is associated with an increased risk of macroproteinuria in type 2 diabetic patients. We postulate that common genetic or environmental (operative in early life) factors that affect final adult height might also predispose to the development of nephropathy.

MED P09 (R029)

NON-GENETIC DETERMINANTS OF THE AGE OF DIAGNOSIS OF INSULIN DEPENDENT DIABETES MELLITUS

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The **objective** of the study was to determine whether there is a relationship between age of onset of type 1 diabetes mellitus and infant feeding, maternal age and birth weight. **Patients and Methods:** Parents of forty-five consecutive insulin-dependent children of age < 17 years were interviewed with the aid of a structured questionnaire in a hospital-based diabetic clinic. Data on

infant feeding were collected by use of a structured questionnaire; birth weight data was collected by examining hospital records. **Results:** Multiple regression analysis showed that maternal age ($r = -0.17$, $p < 0.001$) and age of introduction of solid food ($r = 0.32$, $p < 0.01$) were independently correlated with the age of diagnosis of IDDM. There was no statistically significant association between age of introduction of cow's milk and the age of onset of diabetes. We **conclude** that early introduction of solid food in infancy and older maternal age might delay the onset of type 1 diabetes.

MED P10 R022

GLUCAGON-LIKE PEPTIDE-1 AND ITS THERAPEUTIC POTENTIAL IN TYPE 2 DIABETES MELLITUS

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Glucose tolerance depends on insulin secretion, insulin action (the ability of insulin to increase glucose uptake by tissues or to inhibit release of glucose by the liver and the kidney) and glucose effectiveness (the ability of glucose to stimulate its own uptake and to suppress its own release). Impaired glucose tolerance is a consequence of impairment in either or all of these processes. An ideal therapeutic agent for type 2 diabetes mellitus should increase insulin secretion, improve insulin action, enhance glucose effectiveness and restore postprandial glucagon suppression.

The incretin hormone, glucagon-like peptide-1 (GLP-1) holds the promise of being such an agent. Studies to date have confirmed that pharmacological doses of GLP-1 suppress glucagon release and potentiate post-prandial insulin-secretion. For these reasons, GLP-1 is being developed as an alternative to conventional oral hypoglycemic agents in the treatment of type 2 diabetes mellitus.

Administration of GLP-1 to patients with type 2 diabetes can normalize post-absorptive and postprandial plasma glucose concentrations. GLP-1 increases insulin secretion and suppresses glucagon release in a glucose-dependent manner. Post-prandial glucose tolerance is further ameliorated by the delay in gastric emptying which GLP-1 produces. However, to date, there has been no convincing evidence to suggest that this hormone improves insulin sensitivity and glucose effectiveness.

Our research, performed in subjects with type 2 diabetes will determine whether GLP-1 improves peripheral insulin sensitivity and glucose effectiveness. Preliminary data is presented together with an overview of current knowledge of GLP-1 and its therapeutic potential.

MED P11 (R020)

A 35-YEAR OLD MALE WITH BONE PAIN AND MUSCLE WEAKNESS

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A 35-year old male was referred for evaluation of bone pain and muscle weakness. These symptoms developed insidiously over the four years prior to referral. During this time he had experienced one spontaneous rib fracture. The first formal evaluation, undertaken eighteen months prior to referral, revealed a serum phosphorous of 1.6mg/dL (2.5-4.5), an elevated alkaline phosphatase and a low 1,25-(OH)₂-D. Bone biopsy established the presence of osteomalacia. The patient subsequently underwent small bowel biopsy which was unremarkable.

Physical examination revealed marked tenderness to palpation of the vertebral column, rib-cage and pelvis. Marked proximal muscle weakness was also present. The remainder of the examination was unremarkable. Laboratory evaluation was notable for a low phosphorous level of 1.1mg/dL.

In view of the proximal muscle weakness associated with osteomalacia and hypophosphatemia, a presumptive diagnosis of oncogenic osteomalacia was made. A search for an occult neoplasm revealed a mesenchymal tumor located in the left femur. Normalization of serum phosphate levels as well as muscle strength was achieved after successful resection of this tumor.

Oncogenic osteomalacia is a rare disorder characterized by renal phosphate wasting and hypophosphatemia. This is mediated by a phosphaturic substance produced by an occult tumor which is usually benign and mesenchymal in origin. Discovery and successful resection of the tumor leads to a cessation of renal phosphate wasting and subsequent resolution of proximal myopathy and osteomalacia.

MED P12 R021

RECURRENT CONFUSION IN A PATIENT WITH SHORT-BOWEL

A. Vella, G. Farrugia. *Mayo Clinic & Foundation. Rochester, MN, USA.*

A 50-year old retired nurse was referred for the evaluation of five episodes of weakness, ataxia, slurred speech, confusion and nausea which had occurred during the three months prior to referral. She had been hospitalized on a number of these episodes and during the acute episodes was shown to have a marked metabolic acidosis with an elevated anion gap (20-23) and a low serum bicarbonate (9-14mmol/L). Blood chemistry was otherwise unremarkable with negative assays for ketones, ethylene glycol and drugs. Complete resolution of symptoms usually occurred within 24 hours of hospitalization and rehydration. Full toxicology screens performed on 2 previous occasions were negative.

The patient's past history was remarkable for a stomach stapling procedure for morbid obesity performed in 1980. She had remained well until July 1991 when due to strangulation of the small bowel most of the small intestine was resected. Subsequently, Total Parenteral Nutrition (TPN) was intermittently used to help the patient maintain her nutritional status. At the time of referral, mental state examination and neurological examination were normal.

Given the presence of a short small intestine and a normal colon, the otherwise normal metabolic screen at baseline and an unexplained anion gap metabolic acidosis during the episodes of confusion, the possibility of D-lactate acidosis was entertained. This was confirmed by a D-lactate level of 8.2 mmol/L (normal – undetectable) obtained during a subsequent episode of confusion. The patient was treated with fluids and oral clindamycin. No further episodes were reported.

D-lactic acid acidosis is a potentially fatal clinical condition seen in patients with a short small intestine and an intact colon. Excessive production of D-lactate by abnormal bowel flora overwhelms normal metabolism of D-lactate leading to an accumulation of this enantiomer in the blood. The number of patients with short bowel syndrome who are at risk of this condition is increasing due to the widespread use of long-term TPN which permits prolonged survival. Increased awareness of this condition is necessary to allow prompt and appropriate treatment.

MED P13 (R110)

THE MIMICRY OF HYPOPITUITARISM

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Hypopituitarism can present in many ways; classically described in textbooks as Sheehans Syndrome. We present 5 unusual case histories all presenting in unusual ways. Case 1: The meningitis. Case 2: The fainting lady. Case 3: The impotent male. Case 4: The hypothyroid lady. Case 5: The thirsty nun.

We describe the differential diagnosis and investigations appropriate to each situation; specific therapy were appropriate and general guidelines in management of patients with this condition.

MED P14 (R117)

GnRH-INDUCED CHANGES IN BIO- AND IMMUNOACTIVE FSH CONCENTRATIONS IN MALE IDIOPATHIC INFERTILITY

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The potential role of defects in FSH bioactivity in idiopathic male infertility with elevated immunoactive FSH (iFSH) levels is poorly understood. A preferential increase in bFSH following pulsatile GnRH administration in boys with idiopathic hypogonadotropic hypogonadism has been reported. We have used a new homologous bioassay based upon the hFSH receptor cotransfected into CHO cells with a cAMP responsive luciferase reporter gene to study basal and GnRH-induced B/I FSH ratios in idiopathic oligozoospermia. Ten infertile males with elevated iFSH levels and severe oligozoospermia ($<5 \times 10^6$ sperm/cc) were included in the study. Baseline bFSH and iFSH concentrations were obtained and the FSH response to a GnRH bolus was also determined. Subsequently, exogenous GnRH (starting dose 4ug) was administered every 120 minutes sc via a portable infusion pump for a minimum of six months. Reassessment after one month on pulsatile GnRH was carried out to ensure capture of the LH pulses by exogenously administered GnRH. The mean baseline iFSH, bFSH and B/I FSH ratio (mean \pm SD) estimated on pooled sera from samples taken every 10 minutes during a twenty-four hour in-patient stay in the Cornell Clinical Research Center were 15.2 \pm 5.9mIU/ml, 13.1 \pm 6.1mIU/ml and 0.89 \pm 0.22 respectively in the infertile males (B/I 0.94 \pm 0.31 in normal males; n=19). Estimation of iFSH, bFSH and B/I ratio in pooled sera following a standard GnRH stimulation test (100ug GnRH) prior to the initiation of GnRH therapy gave values of 26.9 \pm 8.5 mIU/ml, 33.5 \pm 12.9 mIU/ml and a ratio of 1.22 \pm 0.24 respectively in the infertile males. Following pulsatile GnRH therapy, a B/I FSH ratio of 1.01 \pm 0.23 was observed with a mean iFSH of 13.95 \pm 5.1mIU/ml and a mean bFSH of 13.8 \pm 5.89 mIU/ml. In 8 out of 10 patients, the increase in B/I ratio following bolus GnRH administration appeared to be due to an marked preferential increase in bFSH secretion.

Conclusions: Using a homologous FSH bioassay, bolus GnRH administration can stimulate bFSH secretion in a number of male patients with idiopathic infertility. However, longterm pulsatile GnRH administration in a physiological manner does not have any such effect on bFSH.

MED P16 (R160)

FIVE YEAR RE-ADMISSION PATTERN FOR ADULTS PREVIOUSLY ADMITTED FOR ASTHMA. IS THERE ANY GENDER DIFFERENCE?

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Background: Hospital admission rates for asthma are higher in adult females when compared to males in many countries. This appears to be due to a higher prevalence of severe asthma in female patients.

Aims: To compare the five year re-admission pattern of a number of male and female patients previously hospitalized for asthma.

Patients and methods: 248 patients (ages 15-54), 148 female (59.7%, mean age 33.0, SD 12.7) and 100 male (40.3%, mean age 31.2, SD 11.9) represented all admissions for asthma to St. Luke's Hospital, the only hospital serving the whole of the island of Malta, for the three year

period from 1989 to 1991. Data on all hospital admissions for asthma was obtained retrospectively for 1992-1996.

Results: Of the 248 previously identified patients, 110 (74.3%) of female patients were never re-admitted compared to 79 (79%) of male patients. 20 (13.8%) of female patients were re-admitted once, 13 (8.8%) 2-5 times in five years, and 5 (3.4%) more than five times, compared to 10, 10 and 1 of male patients respectively. The difference in the distribution pattern between genders was not statistically significant ($p=0.36$). The 33 female patients admitted 1-5 times in five years, accounted for 65 admissions, while 20 male patients accounted for 39 admissions. These represented 1.97 and 1.95 admissions per patient per five years, in females and males respectively. ($p=0.98$)

Conclusion: From this data there appeared to be no significant gender difference in the five year re-admission pattern for asthma.

MED P17 (R148)

RNP POSITIVITY IN MALTESE SLE PATIENTS.

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The SLE database at the Rheumatology Clinic, St Luke's Hospital currently includes 62 patients. The presentation, clinical features, ACR criteria and laboratory findings in RNP positive lupus patients (14) were compared to RNP negative subgroup (33).

RNP positivity was significantly associated with, raynaud's phenomenon ($p<0.01$), myalgia ($p<0.02$), myositis ($p<0.05$), neuropsychiatric features ($p<0.05$) and Sm. positivity ($p<0.01$).

RNP positive patients had a higher frequency of positive family history, mortality, malar and maculopapular rashes, nail-fold infarcts, telangiectasia, digital vasculitis, photosensitivity, arthritis, pleurisy pericarditis, pericardial effusions, depression, headache, psychosis and TIA.

MED P18 (R149)

MALE SLE PATIENTS IN MALTA

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The SLE patient database at the Rheumatology Clinic, St. Luke's Hospital includes 62 patients, 58 of which have complete data. The patients were grouped according to sex (7 males Vs 31 females). The presentation, clinical manifestations, ACR criteria and laboratory findings of the 2 groups were analysed and compared.

Serositis as the initial manifestation at presentation was significantly commoner in males (29% Vs 2%; $p<0.05$). Cardiorespiratory problems such as pleurisy, pericarditis, pericardial effusions and myocarditis were more frequent in the male subgroup.

Female patients had more arthritis, myositis, neuropsychiatric manifestations (depression, psychosis and headache) anemia, leucopenia and ENA positivity than their male counterparts. All 6 mortalities recorded were in the female subgroup.

MED P19 (R067)

RENAL BONE DISEASE IN MALTESE RENAL TRANSPLANT PATIENTS – A CROSS-SECTIONAL STUDY

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Musculoskeletal complications after renal transplantation are well recognized. These may be broadly categorized into immunosuppression-related bone disease, irreversible accumulated bone disease (aluminium, amyloid) and persisting hyperparathyroidism. Persistent hyperparathyroidism may take months or even years to normalize. 15 renal transplant recipients under the care of one physician were identified and studied. Demographic data, symptoms and signs, and laboratory investigations were abstracted. The results will be presented and discussed in the context of an accompanying study on bone disease in dialysis patients.

MED P20 (R072)

MEMBRANEOUS NEPHROPATHY IN MALTA - A CLINICOPATHOLOGIC STUDY

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Membranous Nephropathy (MGN) is the most frequent cause of glomerulonephritis in adults with Nephrotic syndrome. However, no data is yet available in Malta.

Aim: To study frequency, clinical and pathological features of MGN in Malta.

Methods: 18 patients between 1993 - 1998 with biopsy-proven MGN were retrospectively identified and their records abstracted.

Results: 9 males and 9 females (representing 8% of all patients undergoing percutaneous native renal biopsy during the study period) had a mean age of 51.8 years at time of biopsy (range 20-73 years). At biopsy, nearly all patients were asymptomatic. All had proteinuria, often (67%) in the nephrotic range; mean 24 hour urinary protein excretion was 4845 (range 100-14780) mg/24 hr. Elevations in serum creatinine (n=4; 22%) and blood pressure (n=4; 22%) were also noted. Light microscopy was normal in 4/19; revealed typical glomerular capillary wall thickening and 'spikes' on silver staining in 11/19 cases; and in 3/19, focal segmental mesangial or sclerosing changes were observed. In all cases, cellular proliferation was absent. Immunoperoxidase staining revealed granular deposits in the glomerular basement membrane (GBM) of G (71%), Clq (71%), IgA (35%), IgM (59%), C3 (47%). 5 patients had also mesangial deposits, usually of M and Clq, whereas 3 patients had only mesangial deposits on immunohistology. All patients had plentiful subepithelial deposits on electron microscopy, and some also had a thickened GBM and deposits in the mesangium and/or GBM. MGN could be classified as idiopathic in 12, possibly related to rheumatic disease (n = 3), lupus nephritis (n = 2) and malignancy (n = 1). Although with short follow up, 2 patients died of extra-renal causes and 2 patients progressed to end stage renal failure.

Conclusion: The incidence of MGN of 8% in patients undergoing renal biopsy is similar to that seen in Western Europe. The outcome of idiopathic MGN is variable and treatment is controversial.

MED P21 (R073)

CYTOMEGALOVIRUS INFECTION IN RENAL TRANSPLANT RECIPIENTS

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The prevention of clinical disease due to CMV has assumed increasing importance in solid organ transplantation with the advent of ever more potent immunosuppressive regimens and, for the first time, effective antiviral agents. Prophylaxis to all transplant patients with hyperimmune anti-CMV immunoglobulin preparations, high dose oral acyclovir, or therapy with intravenous ganciclovir has decreased the incidence of clinical disease significantly in renal transplant patients, and in seropositive heart and liver transplant patients. Prophylaxis with attenuated live CMV vaccine appeared to provide partial protection in kidney transplant recipients, not affecting the incidence of infection, but decreasing the incidence and severity of clinical disease.

Our approach has been somewhat different, and has been based upon two general principles: the identification of transplant subgroups at particularly high risk for CMV disease and the linkage of antiviral strategies to the intensity of the immunosuppressive therapy that is required. We advocate the prophylactic treatment of high risk patients (D+/R- combination) using oral ganciclovir for 12 weeks. Patients with moderate risk for active CMV infection (D+/R+, D-/R+ combinations) would benefit from a strategy that implements regular monitoring for CMV viraemia (usually 4-7 days before the onset of symptoms) by such rapid techniques as the antigenaemia assay or PCR. In case of positive results, preemptive therapy with low dose (2.5-5.0 mg/kg/day) intravenous ganciclovir is then commenced. Preemptive intravenous ganciclovir is also given to all at risk patients who receive antilymphocyte antibody therapy (OKT3 or ALG). This has been shown to decrease the incidence of clinical CMV disease from 65 to 15%.

MED P22 (R076)

FAMILIAL MEDITERRANEAN FEVER (FMF) : FROM INFLAMMATION TO AMYLOIDOSIS

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Case report: GZ, a 29 year old male, experienced attacks lasting 2-3 days of low grade fever, joint pains and abdominal pain starting at eight years of age. During his early twenties, extensive investigations for right ankle arthritis, epigastric pain, right sided pleurisy and abdominal pain proved inconclusive. During one admission, the diagnosis of FMF was seriously considered but a metaraminol test had to be discontinued because of side-effects. Aged 27, GZ developed left flank pain. Heavy proteinuria and an elevated serum creatinine (140-170 $\mu\text{mol/l}$) were noted. A renal biopsy revealed heavy deposits of AA Amyloid in all glomeruli, arterioles and parts of the interstitium. Colchicine 0.5 mg tds was commenced as monotherapy with immediate and complete relief of all symptoms. At 6 months, improvements were observed in the serum creatinine (170 to 138 $\mu\text{mol/l}$), 24 hour urinary protein (18050 to 7002 mg), C-reactive protein (96 to negative) and albumin (27 to 38 g/dl). When the patient casually decreased his colchicine dose, renal function deteriorated (creatinine 349 $\mu\text{mol/l}$; 24 hour protein 9680 mg). On resuming his colchicine therapy in the proper dosage, proteinuria declined and renal function again improved (creatinine 227 $\mu\text{mol/l}$).

Conclusion: FMF is an autosomal recessive condition affecting populations of Mediterranean origin. The prevalence of FMF in Malta is unknown; this is the first documented report of FMF-induced renal amyloidosis in a Maltese patient. FMF is characterized by polyserositis (peritoneum, pleura, pericardium) but other tissues can also be involved, such as articular synovia, skin and muscle. The FMF gene (located on 16P13.3) encodes a protein called Marenstrin/pyrin which may be a neutrophil-specific transcription factor. Despite ignorance regarding the exact cause and pathogenesis

of FMF, colchicine is a very efficient treatment which prevents inflammatory crises in most patients and the development of amyloidosis in all cases. As this case report shows, colchicine has beneficial effects on nephrotic syndrome even after the appearance of amyloid.

MED P24 (R135)

CHEST RADIOGRAPHIC AND CT CORRELATION OF METASTATIC LUNG PARENCHYMAL CALCIFICATION IN PATIENTS WITH RENAL FAILURE.

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Parenchymal lung calcification is a rare complication of patients on long term dialysis and is due to the long term effects of calcium / phosphate imbalance in combination with hyperparathyroid changes. The disease process itself is a benign entity. The radiographic findings are however often confused with lung consolidation or oedema leading to inappropriate treatment. The purpose of this poster is to describe the radiographic findings of three patients who were on long term haemodialysis who presented with abnormal chest radiographs. All three patients had computerised tomography (CT) scans. The findings on both plain radiographs and CT are discussed and the diagnostic features described.

LEARNING OBJECTIVES.

- 1) Describe the pathophysiological causes of metastatic parenchymal calcification.
- 2) Demonstrate the typical radiological features on both CT and plain radiographs.
- 3) Emphasise the importance in making the correct diagnosis in order to prevent inappropriate management.

MED P25 (R077)

ETHICAL ISSUES IN DIALYSIS

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The withholding of or withdrawal from dialysis are issues which frequently confront practicing nephrologists. These decisions are intertwined with complex ethical, psychological and financial issues that are becoming increasingly important in this era of economic crisis for most health care systems. The medical literature on withholding dialysis is extremely limited. We and others feel it may be appropriate to withhold dialysis in the following specific clinical settings: severe dementia, permanent coma, end stage lung, liver or heart disease, severe mental disability, severe continued unremediable pain, persisting multiple organ system failure despite intensive therapy. However, in Malta, limited economic resources force government to establish acceptance criteria for dialysis that are more stringent than those outlined above. Rationing of therapy requires that the ethical principles of equal distribution, well-being of the majority, availability of resources and non-discrimination because of sex, age, race, religion and socio-economic status be taken in consideration.

Withdrawal of long-term dialysis in patients with ESRF is now emerging as an issue in Malta. Usually, reasons for foregoing dialysis are failure to thrive, medical complications and access failure. Ethical principles supporting the right of competent individuals to withdraw from dialysis or to refuse the initiation of dialysis include the principle of autonomy and the rights of self-determination and privacy. Advance medical planning is encouraged as advance directives will be helpful when decisions need to be made for incapacitated dialysis patients.

Rationing of therapy can be a source of conflict between physicians, patients and their families. Many ethical conflicts can be avoided by clarifying who makes the difficult decisions to limit care.

The participation of bioethicists and dialysis and transplant patients is vital in this process. The last word as to the rationing of services should come from the society itself, after an adequate consensus has been achieved.

MED P26 (R169)

EXERCISE STRESS TESTING DOES NOT INDUCE MYOCARDIAL INJURY. A STUDY BASED ON SERUM MARKERS

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Exercise Stress Testing (EST) is routinely used in the diagnosis of Coronary Artery Disease in patients (pts) with chest pain.

Aim: In order to evaluate whether Exercise Stress Testing results in myocardial injury, assay of the traditional markers Creatine Kinase (CK) and its isoenzyme CKMB, together with the recently introduced cardiac Troponin T (TnT) was performed. TnT is an early and highly specific marker of myocardial cell injury.

Methods: CK, CKMB and TnT were assayed immediately before and 24 hours after the EST in 51 consecutive pts (mean age 58 years, 38 men, 13 women). Pts with acute myocardial infarction (MI) or unstable angina within the fortnight prior to the test were excluded. 20 pts were being investigated for atypical chest pain, 14 pts had typical angina and 8 pts were post MI. The EST was performed for evaluation of medical treatment in 2 pts, for assessment of Coronary Artery Bypass rafting in 5 pts and of Percutaneous Transluminal Coronary Angioplasty in 5 pts. The diagnostic cut-off range for myocardial injury was considered as CK >200 IU/L, CKMB >25 IU/L and TnT >0.2 µ

Results: The EST was negative in 30 pts, positive in 19 and non-diagnostic in 2. The mean values of the cardiac markers are listed below.

| EST | Pre EST | | | Post EST | | |
|-----------------|-------------|------------|-----------|-------------|------------|-----------|
| | TnT µg/l | CK IU/L | CKMB IU/L | TnT µg/l | CK IU/L | CKMB IU/L |
| NEGATIVE | 0.02 | 165 | 23 | 0.02 | 139 | 19 |
| Positive | 0.04 | 91 | 20 | 0.02 | 94 | 22 |
| Non diagnostic | 0 | 101 | 28 | 0.04 | 139 | 18 |

Conclusion: EST does not result in myocardial damage and remains a safe non-invasive investigative tool for Coronary Artery Disease.

MED P27 (R170)

IS EARLY AMBULATION 4 HOURS AFTER CORONARY ANGIOGRAPHY WITH 7F-CATHETERS SAFE?

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Early ambulation after coronary angiography has been advocated with small diameter catheters. This however results in poorer image quality and entails greater operator experience.

Aim: To evaluate whether shorter bed rest (4 hours (hrs)) after coronary angiography using 7F sheaths and catheters increases femoral complication rate when compared to conventional 8 hr bed rest. In particular, whether it increases the risk of bleeding after ambulation of the patient (pt) – late rebleeding.

Methods: 345 consecutive pts undergoing coronary angiography using 7F sheaths and catheters were randomized to 4 hr (172 pts) and 8 hr (173 pts) bed rest after the procedure. Pts

were examined on an out-pt basis within 4 days of the procedure by physicians blind to the randomized allocation. Both groups had comparable pt characteristics.

Results:

| | 4 hrs | 8 hrs | Significance |
|--|-----------------|----------------|---------------------|
| No complications | 115 (67%) | 127 (73%) | NS |
| Small haematoma (<5 cm) | 31 (18%) | 24 (14%) | NS |
| MEDIUM HAEMATOMA (5-10 CM) | 22 (13%) | 16 (9%) | NS |
| Big haematoma (>10 cm) | 1 (0.6%) | 4 (2%) | NS |
| EARLY REBLEEDING (DURING BED REST TIME) | 4 (2%) | 4 (2%) | NS |
| Late rebleeding (after ambulation) | 2 (1.2%) | 0 | NS |
| Pseudo-aneurysm | 1 (0.6%) | 0 | NS |

In the 4 hr group 3 pts with early rebleeding and the pt with a pseudo-aneurysm had a haematoma. Late rebleeding occurred immediately on ambulation in both pts. Recompression and a further 4 hr bed rest was resorted to without further complications. In the 8 hr group 2 pts with early rebleeding had a haematoma.

Conclusion: 4 hr bed rest after coronary angiography using 7F sheaths and catheters is safe and does not confer an added risk of femoral complications. Late rebleeding is rare, occurs immediately on ambulation and is easily managed.

MED P28 (R101)

SOLUBLE ADHESION MOLECULE EXPRESSION IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFT SURGERY

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Neutrophil mediated endothelial injury plays an important role in cardiopulmonary bypass(CPB)-induced organ dysfunction. The adhesion of neutrophils to the endothelium is central to this process. It has been well documented that CPB induces neutrophil activation and changes in neutrophil adhesion molecule expression. However, the effect of CPB on endothelial cell activation is not known. We therefore made serial measurements (by specific ELISA) of plasma levels of the soluble "endothelial" adhesion molecules, ICAM-1 and E-selectin in patients undergoing routine CPB (n=5) and in a control group (thoracotomy without bypass, n=3).

Results

plasma levels corrected for haemodilution (mean±SEM, ng/ml)

| | pre-bypass | end-bypass | 24hr post-bypass | 48hr post-bypass |
|------------|-------------------|-------------------|-------------------------|-------------------------|
| E-selectin | 21.8± 1.9 | 19.7±3.1 | 26.6±4.9 | 32.3±2.7 |
| ICAM-1 | 205.8±30.0 | 185.1±32.6 | 331.7±37.8* | 373.9±49.0* |

**p*< 0.05 (of pre-bypass)

This study demonstrates an increase in circulating ICAM-1 and soluble E-selectin in the first 48 hours post-CPB. This supports the hypothesis that endothelial cell activation occurs during CPB. Further studies (in both

clinical and experimental CPB) are ongoing to examine the biological significance of these findings.

OBG P01 (R197)

PSYCHOLOGICAL ASPECTS OF MATERNITY CARE

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Objectives: Assessment of four quality indicators of women's expectations and perceptions on aspects of their care. These aspects were:

- i) appropriate information giving on maternity care from health personnel
- ii) communication with health professionals
- iii) involvement in decision – making in maternity care
- iv) care delivery by continuity of carer

Methods: A random sample of mothers (n=104) was chosen by systematic sampling of every third booker in 1997 at Gozo General Hospital. A two-part questionnaire was the instrument used to obtain information for this study. The first part of the questionnaire targeted women's expectations, and the second part, their perceptions of the psychosocial aspects in the maternity unit in our hospital.

Results: Forty percent were primipara and 60% were multipara. Most primipara expected information from maternity unit professionals. Multiparous women felt they needed more information regarding care postnatally. The younger the mothers, the less information and communication they expect regarding their maternity care. Eighty percent of primiparous and 94% of multiparous women perceived that they were more involved in decision making of their maternity care than they expected. A high response to the questionnaire suggests that women were concerned about the quality of care proposed by the quality indicators.

Conclusions: Expectations and perceptions were high on the information aspect of care. The continuity of carer provides a personalised service, enhances communication and actively involves the client in her care. The changes in maternity care that consumers ask for do not cost large sums of money, but do require substantial shifts in attitudes and values of hospital administrators and health personnel.

OBG P02 (R196)

ATTITUDES OF WOMEN TOWARDS GYNAECOLOGICAL CANCER SCREENING IN A SMALL ISLAND POPULATION

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Introduction: Women over the age of fifty represent one third of the total population of thirty thousand on a small island.

Objectives: Review of the main cancer trends in our small island over a ten year (1986 to 1995). The attitude towards a screening programme is assessed.

Method: Two hundred (males n=92, females n=108) were interviewed, and a questionnaire was filled in.

Results: Women were more aware of the screening tests available and their acceptance to participate in a cancer screening programme was higher than that of the males. The common reason for refusal of a regular health check up, is the fear of having a positive result. Also there was lack of awareness of the benefit of early detection. Cancer of the uterine body and cancer of

the ovary showed a higher incidence in our population compared to the main island. Associated features which could be contributing to this higher incidence are obesity, nulliparity, diabetes and hypertension. Presentation to the doctor tends to be late especially in ovarian and breast cancer.

Conclusion: Despite an education programme and an easy availability of medical care, there is a need for systematic screening with a recall system.

OBG P03 (R193)

CHANGES IN BONE COLLAGEN MARKERS IN UNTREATED AND OESTROGEN TREATED POSTMENOPAUSAL WOMEN

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Introduction: Postmenopausal bone loss is due to oestrogen deficiency and can be prevented and reversed 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 menopaually 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, 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 1.25mg (Wyeth) and those on no treatment.

Results: Women on HRT (n=65) had a mean drop in pyridium 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). This represents a change of 14.5% which correlates with a change in L2-L4 in the same groups of 13.8%.

Conclusion: Postmenopaually 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.

OBG P04 (R145)

ASSESSMENT OF UTERINE CAVITY OF MYOMATOSUS UTERUS BY TRANSVAGINAL SONOGRAPHY AND HISTEROSONOGRAPHY

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Objective: To compare the diagnostic abilities of transvaginal sonography (TVS) and histerosonography (SIS) for the diagnosis of abnormalities in uterine cavity of leiomyotic uterus.

Methods: Open, prospective study conducted in Gynaecologic Department and the Menopause Outpatient Clinic of Institute of Obstetrics & Gynaecology, Medical University, Lodz, Poland, included 81 women referred for the investigation of fibromyomas. TVS (Hitachi EUB-515) and SIS were performed. Diagnosis was compared with the result of curettage and/or histerography or postoperative diagnosis.

Results: in 9% of all cases there was a failure in good visualization of uterine cavity. In these cases SIS gave possibility of good visualization of the uterine cavity, in 2 cases pathological lesions were detected: one polyp and one endometrial carcinoma. In 2 cases focal lesions diagnosed as endometrial polyps during SIS were shown to be submucous myomas, in 3 cases SIS diagnosis of polyp was confirmed by hysteroscopy and/or curettage. In 13 cases during TVS wide endometrium was detected; in 9 cases SIS showed normal endometrium and submucous myomas; in 3 cases uterine cavity was in another place of the uterus than it was suspected in TVS; in 1 case endometrium was 9mm wide of one layer – endometrial hyperplasia was confirmed after curettage. In 9% of all cases we noted failure to perform SIS because of cervical stenosis.

Conclusions: Histerosonography is more sensitive when compared to the transvaginal sonography in visualizing the uterine cavity of the leiomyotic uterus.

OBG P05 (R189)

CAROTID ARTERY WALL CORRELATES WITH SKIN THICKNESS IN POSTMENOPAUSAL WOMEN

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Introduction: The behaviour of an intermediate blood vessel, the carotid artery, with time after the menopause, and its correlation with skin thickness and lipid profile were determined. The different layers of the carotid were also analysed and any differences noted.

Methods: Postmenopausal women (142) had the external wall of their left carotid artery wall measured by high-resolution ultrasonography (Osteoson DIII, Minhorst). The thickness of each of the three layers of the external carotid arterial wall was measured using a technique developed for this purpose. Dermal skin thickness was then measured using the same apparatus, skin thickness was then measured using the same apparatus. Fasting serum cholesterol and triglycerides were also assessed.

Results: Significant correlations ($P < 0.001$) were found between carotid artery wall thickness and skin thickness. This was particularly so with the media layer, which showed a higher correlation with skin thickness ($P < 0.001$). Conversely, the intima showed a negative correlation with skin thickness ($P < 0.001$).

Conclusion: Skin thickness and the carotid artery media layer thickness decrease with increasing menopause age and are symptomatic of the general connective tissue loss that occurs after the menopause.

OBG P06 (R185)

ILIAC VESSEL WALL THICKNESS IN TREATED AND UNTREATED POSTMENOPAUSAL WOMEN COMPARED TO MENSTRUAL WOMEN

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A study using a low frequency ultrasound (3.5MHz) was employed to assess iliac vessel wall thickness in five different groups of women. The 3.5MHz ultrasound was used to assess the combined vessel wall thickness of the right iliac artery inner wall and vein outer wall. The adjacent walls of both vessels could be measured accurately due to the sonolucent lumina of both artery and vein, anterior and posterior to their combined vessel wall. Three groups of women who were menopausal, were distinguished from each other by the (a) treatment with HRT

(N=32), (b) high risk factors for atherosclerosis (N=14) and (c) an untreated low risk group (N=29). Two other groups of menstrual women without any risk factors for atherosclerosis included women aged about 35 years (N=35) and another group were aged under 35 years (N=16). The highest iliac vessel wall thickness was found in the menopausal group of women possessing high risk factors of atherosclerosis (4.3 ± 0.09 mm). Following this group were the untreated menopausal group of women with a mean iliac vessel wall three groups. The thickness of the hormonally treated menopausal group was 2.93 ± 0.09 mm, the older menstrual group 2.61 ± 0.07 mm, and 2.0 ± 0.06 mm in the young menstrual group. These results confirm the significant impact high risk factors such as accelerated atherosclerosis. Besides these risk factors, age also has a significant influence on vessel wall thickness. This study also suggests that the oestrogenaemic state of a woman may affect the health of the vessel wall. In fact, the ageing process and the oestrogen deficiency state of the menopause may act in synergy to exacerbate atheroma formation.

OBG P07 (R187)

REDUCING THE INCIDENCE OF BRACHIAL PLEXUS INJURIES IN OBSTETRIC PRACTICE 1980-1996

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Over a 10 year period (1980-1990) the incidence of brachial plexus injuries following obstetric trauma was 2.9 per 1000 live births. A review of traumatic shoulder dystocia occurring during 1980-1990 highlighted several risk factors and a high percentage of macrosomic babies (11.8% >4.0kg, 1.5% >4.5kg). The body mass index of mothers incurring this birth complication was high (short, overweight and a high incidence, 12% of gestational diabetes prevalent in the Maltese pregnant population) An analysis of intrapartum traumatic shoulder dystocia between 1980 and 1990 was also performed. Abnormal labour patterns frequently precede this birth complication. Almost one third (31%) of traumatic shoulder dystocia followed instrumental delivery. During the last 6 years (1991-1996) the incidence of brachial plexus injuries fell significantly to 1.1 per 1000 live births. Several factors have been attributed to this significant decrease over the last 5 years. Meticulous 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 ≥ 4.0 kg in 1991-1994 was 10.2% of the baby population.

OBG P08 (R184)

CHANGES OF THE METABOLIC PROFILE ON POSTMENOPAUSAL WOMEN TREATED WITH TRANSDERMAL OESTROGEN

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The menopause appears to have a significant impact on the metabolic risk factors which may influence atheroma formation. A small prospective trial was performed on 29 postmenopausal women who had undergone a hysterectomy and salpingoophorectomy. Baseline metabolic profiles were taken 3 months after the operation and following this washout period, transdermal oestrogen (50um 17-b oestradiol) was administered. After 6 months of treatment, the metabolic

profile was repeated. Although the serum cholesterol did not decline significantly (-4.4%), a significant decrease of 19% was noted in the serum triglycerides. A similar drop was noted in the very low density lipoproteins (VLDL), however the larger molecule low density lipoproteins (LDL) decreased by only 2.7%. A non-significant rise of 4.2% in the high density lipoproteins was obtained after 6 months of transdermal therapy. However, the cardio-protective HDL₂ subfraction rose significantly by 27%. Congruent with the HDL non-significant change, the apolipoprotein A1 remained unchanged. Lipoprotein (a) decreased after transdermal therapy by 24.5%. Anti-thrombin III acting as a surrogate for the coagulation/fibrinolysis system remained the same. The plasma renin activity reflecting the blood pressure decreased non significantly. These findings confirm the beneficial effect of transdermal oestrogen on the metabolic profile of postmenopausal women.

OBG P09 (R186)

A SCREENING MODEL FOR POSTMENOPAUSAL OSTEOPOROTIC FRACTURES

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Introduction: Screening methods for predicting postmenopausal osteoporotic fractures continue to be inaccurate. In an attempt to improve the accuracy of the method, a connective tissue parameter, dermal skin thickness, was included to bone mineral density measurements.

Patients and methods: Two hundred and eighty postmenopausal women who were not receiving any form of oestrogen replacement were recruited from the Department of Obstetrics and Gynaecology and compared to 97 women who had sustained osteoporotic fractures. Skin thickness was measured using an Osteoson ultrasound apparatus (Minhorst) and Bone Mass measurements carried out using a Norland DEXA.

Results: The combination of skin thickness to bone density measurements showed that a very high sensitivity could be maintained (Range 91.7% to 100%) whilst accuracy was increased from 41.6% to 50.9% with various bone mass measurements. Using the combination model the accuracy was increased from 50.1% to 59.1%. This represents a useful increase in accuracy. Skin thickness measurements on their own had a sensitivity of 91.7% and an accuracy of 40% however these measurements had the advantage of being a very rapid and cheap measurement to carry out. Furthermore the equipment used is small and mobile, unlike the usual bone densitometers.

OBG P10 (R199)

GYNAECOLOGICAL CANCER SCREENING IN A SMALL ISLAND

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Women over the age of fifty represent one third of the total population of thirty thousand on a small island. With 105 new cancer patients in 1995 in the small island Gozo, the crude incidence rate is 362 per 100,000 population, 25% of which were gynaecological malignancies. The need for a screening programme is evident after assessment of the main cancer trends in our small island over a ten year period 1986 to 1995. The aim of the study is the assessment of the need for screening of female genital cancers and breast cancers within a small population. Cancer of the uterine body and cancer of the ovary showed a higher incidence in our population compared to the main island. Associated features which could be contributing to this higher incidence are

obesity, nulliparity, diabetes and hypertension. Presentation to the doctor tends to be late especially in ovarian and breast cancer. Despite an education programme and an easy availability of medical care, there is a need for a systematic screening with a recall system. There is already a high awareness of cervical cancer screening. A programme for breast, uterine and ovarian screening is proposed.

OBG P11 (R146)

THE INFLUENCE OF SEX STEROIDS AND SOME ARACHIDONIC ACID METABOLITES AND INHIBITORS OF THEIR SYNTHESIS ON COLLAGEN CONTEXT IN CERVIX AND UTERUS DURING PREGNANCY

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The aim of this study was to determine in experimental model in vivo the influence of eicosanoids and sex steroid hormones on collagen concentration in uterus and a cervix in late pregnancy. The experiment was performed on pregnant rats with known date of conception. In late pregnancy animals were treated with following drugs: diclofenac – cyclooxygenase inhibitor responsible for prostaglandin production. BW755C – dual cyclo and 5-lipoxygenase inhibitor, blocking both prostaglandins and leukotriens synthesis, PGE₂, PGF_{2α}, progesterone, estradiol, mifepristone (RU486), tamoxifen, BN52021 – inhibitor of Platelet Activating Factor (PAF). It was stated, that the connective tissue of uterus and a cervix is influenced by sex steroids. Administration of progesterone resulted in an increase of total collagen in the cervix. The contrary effect was observed after progesterone receptor blocking by mifepristone treatment. Administration of estradiol caused marked decrease in collagen concentration both in uterus and a cervix. Tamoxifen administration caused reverse effect. Only some biochemical features of cervical maturation were observed after subcutaneous administration of prostaglandins. It confirms a theory of local influence of prostanoids, what is probably due to their short half life time period. The inhibition of endogenous prostaglandin synthesis resulted in augmentation of water content and decrease in total collagen concentration in pregnant uterus. The significantly higher affinity of uterine connective tissue to PGF_{2α} when compared to PGE₂ was observed.

OBG P12 (R222)

PREDICTING OUTCOME IN IUI

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A retrospective analysis of 495 heterogenous cycles of IUI was used to identify variables which could help predict outcome of this treatment modality. The overall pregnancy rate per cycle was 11.3%.

Logistic regression identified six variables which were related to outcome and were subsequently incorporated in a statistical model. The number of follicles was found to have a linear association with the risk ratio (chance) of pregnancy. (Cycles with 4 to 5 follicles were associated with a risk ratio of 4.77 compared with cycles having only 1 follicle). The age of the woman was also found to have a linear association with pregnancy. (Women younger than 25 years had a risk ratio of pregnancy 3.01 greater than that of women older than 35 years). The % motility and % normal morphology (by strict criteria) of sperm in the fresh ejaculate were the male factors that significantly and independently predicted outcome. (% motility >50 was associated with a risk ratio of pregnancy of 2.95 compared to % motility ≤50. % normal morphology >14 was

associated with a risk ratio of pregnancy of 1.8 compared to % normal morphology ≤ 14). A female diagnosis of endometriosis or lupal factor impacted negatively on the probability of pregnancy (risk ratio of 0.17), compared with other female diagnoses. Ovarian stimulation also impacted negatively on the probability of pregnancy within this statistical model (risk ratio of 0.58), compared with natural cycles.

When cases of purely male factor aetiology were divided according to % normal morphology, a statistically significant difference in outcome was noted between the different categories. PR?cycle was 2.63% with normal morphology $< 5\%$ and 11.41% with normal morphology of 5-14%. In cases of idiopathic infertility which served as controls since normal morphology was $> 14\%$, the PR?cycle was 24%.

PSY P01 (R243)

THE USE OF METHYLPHENIDATE IN MALTA

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Methylphenidate is a stimulant drug that is used in the treatment of Attention Deficit and Hyperactive Conduct Disorders. In the past its use has been controversial with much commoner use in the USA as compared to the UK and France. Other European countries have taken a diversity of positions. Recently there has been a resurgence of interest in its use and Malta has mirrored this phenomenon. There may also have been local factors such as the setting up of a Hyperactivity Support Group which have contributed to this phenomenon by increasing awareness. The use and efficacy of methylphenidate in Malta have, however, never been properly evaluated.

This study reviews, briefly, the current scientific evidence for use of methylphenidate in Attention Deficit and Hyperactive Conduct Disorders. It also explores whether use in Malta is in fact targeting the right individuals and whether its use is being effective in alleviating the disorder.

A retrospective sample of 43 individuals, known to be on methylphenidate, were studied. Because Methylphenidate is a Controlled Drug, this sample should constitute the whole population on such medication in Malta. Information was gathered using a semi-structured questionnaire focusing on symptoms before and during treatment. The aim was to validate diagnosis, ascertain acceptability of treatment and objectify any improvement in symptomatology. To maximise reliability and validity of information, wherever possible, the patient's case file was consulted and direct contact was made with the patient or parents and with the treating doctor.

Conclusions are drawn regarding the appropriateness of use, both in terms of clinical indications and recommended duration and dosages during trial of treatment. This study also seeks to establish whether symptomatic improvement noted translated into overall objective improvement and the extent to which unacceptable side effects were a reason for discontinuation of treatment. Finally recommendations are made regarding a suitable protocol for uniform prescribing guidelines with regard to correct indications and in relation to alternative medications and therapeutic measures.

PSY P02 (R219)

NETWORK THERAPY, DEVELOPING A COMMUNITY USER SUPPORT SYSTEM.

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Network therapy brings together a group of individuals with mental health problems, to provide professional support, mutual support and problem solving. A buddy system is used to further enhance support, socialisation and integration. Aims include increasing level of skill and function and decreasing re-admission rates.

A pilot project was initiated with a group of six women discharged from psychiatric unit, with professional support being provided by an occupational therapist. The effects on the group and individuals will be described. Professional support was subsequently withdrawn for one month and its consequences will be discussed.

PSY P03 (R220)

QUALITY OF LIFE OF CHRONIC MENTALLY ILL PEOPLE WITH A HISTORY OF PREVIOUS INSTITUTIONALISATION.

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De-institutionalisation is a major aim of mental health reform. Notwithstanding good intentions, the resulting quality of life of patients who have been discharged into the community has at times been of very poor level even in well developed countries.

Twelve patients with a previous history of long hospital stay and subsequent discharge were evaluated for quality of life. Parameters evaluated included living situation, family relations, social relations, leisure and participation, work, financial situation, general well being and self concept. The life satisfaction scale was also applied for the different areas.

Results of this survey will be given and their implications discussed.

PSY P04 (R104)

INFLUENCE OF CANNABIS ON THE OUTCOME OF PSYCHOSIS

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We sought to examine the influence of cannabis on the outcome of psychosis. We followed up 98 patients (history of psychosis of less than five years) with the following DSM3-R Diagnosis: schizophrenia-spectrum disorders = 56, affective disorders = 25 and other disorders = 16.

(Mean age = 25.4 years, males = 65) Follow-up assessments (modified version of Life Chart Instrument and Iager Scale for Negative Symptoms) were performed four years after index admission (Mean = 3.7 years, S.D. = 2.5). Patients were categorised into four levels of increasing cannabis intake: 1. no intake, 2. intake at index only, 3. intake at follow-up only and 4. intake at index and follow-up. Odds Ratios (adjusted for age, ethnicity and sex) for each cannabis intake level, taking the patients with no intake as reference category, with their Confidence Intervals were:

- Presence of Moderate or Severe Symptoms** 1.61 (0.35-7.58), 1.32 (0.33-5.31) and 3.67(1.12-12.07)
- Continuous Course of Illness** 1.68 (0.37-7.51), 1.09 (0.28-4.27) and 2.82 (0.82-9.70),
- Presence of Negative Symptoms** 0.63 (0.29-2.86), 0.82 (0.21-3.28) and 1.14 (0.33-3.84).

These results suggest a dose dependent negative influence of cannabis on outcome of positive

psychotic symptoms, but not for negative symptoms.

PSY P05 (R165)

A DRUG UTILISATION REVIEW AT A PSYCHIATRIC HOSPITAL

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A one year (1996-97) retrospective qualitative analysis of drug consumption data (by Defined Daily Doses as stated in the Anatomical Therapeutic Chemical Classification Index of the World Health Organisation Collaborating Center for Drug Statistics Methodology, 1996) at Mount Carmel Hospital (MCH) for Psychiatric Services, Department of Health, Malta, revealed that more than 50% of the annual expenditure (required to stock the MCH pharmacy) accounted for drugs used in psychiatry. Assessment of the prescribing clinicians' opinion, through questionnaire, on treatment protocols, in the form of algorithms (Bethlem & Maudsley Prescribing Guidelines, 1996), and formulary development pointed at the need for better pharmaceutical and patient management services. Analysis of drug consumption trends suggested an unjustified extent of polypharmacy and a need of more informed, cost beneficial prescribing. Clinicians (82%) at MCH favoured the development of treatment protocols as useful guidelines for better patient management. Preference was shown for those guidelines used in the treatment of particular disorders and side-effects (42%). Review by a multidisciplinary team was perceived as the best way of developing treatment guidelines at MCH. Open criticism of the treatment algorithms highlighted the restrictions for the prescribing of certain drugs together with the need of more factual, independent information to prescribers. The proposal for the development of a formulary for MCH was welcomed by all respondents (n=30) and perceived as an essential tool for the promotion of rational drug use. The respondents agreed that a team approach between psychiatrists and pharmacists should be set up to update the formulary on a regular basis. The practice of rational drug use can however adopt a restrictive rather than an educational approach. Continuous monitoring and evaluation should be addressed not only at consumption and expenditure but also at efficacy and safety, with pharmacists becoming more proactive and adopting more clinically relevant roles in delivering psychiatric pharmaceutical care services.

PSY P06 (R068)

MENTAL HEALTH ISSUES IN GENERAL PRACTICE SETTINGS.

Joseph R. Cassar. *Mount Carmel Hospital, Attard, Malta*

Up to a third of medical patients have a diagnosable psychiatric disorder and 75% of these are anxiety or depressive disorders. Distressed high users of primary care have even higher rates of psychopathology. Cognitive, emotional and behavioral symptoms known as "mixed anxiety depression," are also common. Men and women suffer roughly equal rates of major mental disorder. With the exception of substance abuse, however, which can develop at roughly twice the rate of women, women have significantly higher rates of psychiatric conditions most commonly seen in general practice settings. Diagnosing mental illness is not always easy. Studies have demonstrated that specific factors interfere with recognition of depression in primary care settings and decrease the likelihood of an accurate diagnosis. Even though, other studies indicate that persons with anxiety disorder seek treatment from general medical facilities

as often as they do from mental health settings, yet primary care providers often do not recognize and treat these individuals effectively, perhaps because anxiety disorder presents differently in the general health setting. A review of the literature is carried out in order to look at ways that can aid the general practitioner to feel confident with diagnosing mental health problems or dually diagnosed patients under his/her care. Case identification strategies including screening tools and diagnostic modules have been developed. Other strategies include educational training programs and psychiatric consultation services, designed to facilitate psychopharmacological and other types of treatment of psychiatric disorders in general practice settings. Specific populations also present unique characteristics of mental health that one needs to be aware of. An overview of presenting symptoms in geriatric, pediatric and female populations will be undertaken, in order to facilitate better management in the primary care setting.

DEV P01 (R123)

CUTANEOUS LEISHMANIASIS IN GOZO.

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Cutaneous Leishmaniasis is caused by a vector borne protozoan parasite known to be endemic in Malta and Gozo. The disease normally produces skin ulcers on the exposed parts of the body such as the face, arms and legs. It is often under-diagnosed and presentation to the doctor tends to be late. If left untreated it may leave the patient permanently scarred, a stigma which can cause serious social prejudice.

There were 55 (48.7%) cases of Cutaneous Leishmaniasis in Gozo as compared to 58 cases in Malta notified between 1983 to March 1998.

Eighty-two % of the cases originated from a relatively small coastal area of Gozo, namely Nadur, Ghajnsielem and Qala with decreasing order of incidence.

The disease is equally distributed among sexes (50% in both males and females). It is primarily a disease of the young with 59% of cases being under 10 years of age when first diagnosed.

The number of cases in Gozo has shown a steady increase in the past years with a 3-fold rise between 1986 and March 1998.

The study was performed by analysing all notified case histories of the disease at the Disease Surveillance Branch, Public Health Department. The aim of the study is to identify epidemiological factors including socio-cultural / behavioural attitudes which may lead to higher incidence of the disease in certain areas. The launching of a health education and promotion campaign to stimulate public awareness about the disease is being proposed.

HCP P01 (R128)

DEVELOPING NEW MODELS OF CARE IN THE NEW HOSPITAL, TAL-QROQQ: A WHOLE SYSTEM APPROACH

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The Design Brief for the New Hospital calls for the development of new models of care. These have been developed throughout the planning stages and are to be introduced into St. Luke's Hospital prior to transfer to the new site.

These models are based upon two main principles:

1. The aggregation of disease based specialities such as Cardiac Services and Neuro Sciences
2. The distribution of patient care into distinct cohorts incorporating four main elements:

- Ambulatory Care
- Emergency Care
- Specialist in-patient Care
- Post-acute Rehabilitation care

This paper outlines the basic principles underlying these models of care, highlighting the challenges and difficulties in implementing these policies. It also explains the Whole System Approach towards developing these models. This approach, which has been adopted in the planning process for the New Hospital, identifies the four main areas of clinical activity mentioned above whereby patients are directed into specific areas of the hospital, depending upon their specific needs.

These models are proposed in order to ensure hospital services are best configured to meet the changing needs of patients as they progress through their care. Thus a whole system service model has been developed to reflect the needs of patients as they progress through their hospital care.

HCP P02 (R082)

THE DEVELOPMENT A TELEMEDICINE LINK WITH A TERTIARY PAEDIATRIC CARDIOTHORACIC CENTRE

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Telemedicine is an electronic mode of transmitting medical information interactively between remote sites. This can be done by direct transmission of information between one computer and another, or over the Internet. World-wide, telemedicine is changing conventional forms of health care delivery by providing efficient solutions to old and new situations. Locally, in the subspeciality of paediatric cardiology, we liaise with a tertiary centre in the United Kingdom in order to treat children with congenital heart disease (CHD). Diagnosis of CHD is made by echocardiography, and in elective situations, echocardiographic examinations can be forwarded on videotape by courier to the tertiary centre. However, in acute cases, it is not possible to exchange images by conventional means. Hence, decisions regarding management options and transfer abroad for treatment must be taken over a telephone conversation or a fax. In the Neonatal Paediatric Intensive Care Unit, we are developing a simple telemedicine technique whereby video sequences are digitally captured onto a computer hard disk where they can be edited, put together as a new computer file, compressed, and sent over a conventional telephone line to the tertiary centre. Naturally, the transfer of still images is even easier to their far smaller size when compared to a video clip. This technique will allow the local team and the tertiary centre to make better informed decisions more rapidly regarding management strategies of patients with CHD.

HCP P03 (R174)

DEVELOPMENT OF A MODEL TO SUPPORT THE PRACTICE FOR THE INTRODUCTION OF NEW DRUGS INTO THE GOVERNMENT HEALTH SERVICES IN MALTA

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The proliferation of new drugs challenges clinicians to keep abreast of new developments and to integrate clinical expertise with the best available clinical evidence. Pressures of the introduction (and cost) of new drugs and technologies, an aging population and the increasing expectations of patients are forcing policy makers in developed countries to look at how they are to control the increasing cost of health care. The pharmaceutical industry is keen to recover the costs spent on research and development of new pharmaceuticals.

Increasingly economic analyses are being used to justify policies and the use of resources, by introducing measures of cost and quality as well as effectiveness. Moreover decisions on what should and should not be funded from public funds will be influenced by the overall framework of national aims and objectives, by professional opinion and public values. Linking clinical and financial aspects of drug use requires expanded skills for clinicians, policy makers and for those who make decisions to include drugs on formulary. Moreover formulary management activities are increasingly being evaluated in terms of their impact on overall disease management not just acquisition costs.

A model of the practice is being developed to provide a discipline in understanding the nature of the local practice and in exploring options for future policy and action. The development of the model will lead to a concurrent progress of the practice.

The project is at the stage of assessment and situation analysis. A concerted effort will be indispensable for the realisation of this project. This conference groups together all the parties involved including policy makers, clinicians and representatives of the pharmaceutical industry. The opportunity is being taken to introduce the project, to obtain feedback for its implementation and to encourage cooperation from all concerned and the objectives of the project will be used to motivate contribution.

HCP P04 (R215)

MIND THE GAP: BRINGING INFORMATION TECHNOLOGY TO THE MEDICAL STUDENT

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This presentation will draw upon a two-year experience lecturing cardiovascular physiology to first year medical students using information technology methods. My results make a strong case for the further implementation and development of such teaching methods, as they ultimately improve the students' access to information from a very early stage. The techniques used not only show that the teaching service can be delivered more efficiently and effectively, but also drastically reduce teaching costs in the long term.

RAD P01 (R004)

A WEB-BASED MCQ TUTOR IN RADIOLOGY; AN INNOVATIVE USER-STREAMED TEACHING AID

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An assessment-linked educational tool is presented that is web-based and also fully reproducible on CD-ROM. This testing and tutorial system adapts itself automatically to the level of expertise of the user. The tutor is rapidly and freely accessible from any internet-connected computer and functions on most commonly used browsers.

Method: A randomly accessible bank of radiology questions was derived from standard textbooks. Answers included references to major journals. Global external links are maintained

throughout the system expanding the resources available to the user. Personalised tutorials using text, multimedia and image-maps further enhance interactivity between the user and the tutor. Javascript was integrated within the client's HyperText Markup Language (HTML) code; this replaces the slower and cumbersome server based system traditionally used in most web-based teaching sites. MCQs (<http://www.MCQs.com>) was chosen as an appropriate name for the home page; weekly feedback from the server enabled continual revision of the bank of questions. A dynamic web-based tutor system is thus presented that is universally operational and personalised in a novel fashion to the user.

RAD P02 (R005)

A WEB-BASED INTERACTIVE TUTOR IN GASTRO-INTESTINAL RADIOLOGY USING DYNAMIC HTML

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Purpose

The HTML 4.0 (HyperText Markup Language Version 4.0) specifications recommended by the World Wide Web Consortium (W3C) in December 1997 dramatically expand the tools available for manipulating the presentation and interactivity of web-based documents. Absolute control over the layout of pages through the use of 'cascading style sheets'(CSS) is now possible and the processing capability of scripting languages is now extended to include almost all elements. Our aim was to take advantage of these novel features to create a highly intuitive web-based tutor in Abdominal Radiology.

Method

The scripting language Javascript was used to optimise the interactivity of the HTML code in this Tutor. The response of the user to quiz questions is detected and processed by the Tutor to determine subsequent streaming. Explanations include direct references to online Medline abstracts and complete articles. Detailed tutorials offer the opportunity of expert advice and personalised feedback from specialised authors.

Conclusion

An interactive web-based tutor in Abdominal Imaging and Intervention is thus presented that is dynamic and widely linked to global resources. This tutor is freely available on the address: <http://www.mcqs.com/abdomen> and is constantly updated to reflect changing trends.

RAD P03 (R008)

SIGNIFICANCE OF CALCIFICATION (TESTICULAR/EXTRA-TESTICULAR) DETECTED BY SONOGRAPHY

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Materials & Methods

Case notes and ultrasound studies of scrotum performed over a period of 18 months were evaluated.

A total of 600 ultrasound examinations were performed using a high resolution scanner with a high frequency probe and colour doppler.

Results

Of the 600 cases (age group 20-80 years), scrotal calcification was noted in 23 patients (3.3%). The calcification was testicular in 13 cases (56.52%) and extra-testicular in 9 cases (39.1%) and one case with both intra and extra testicular calcification (4.3%). Of the extra testicular

calcification, 7 had calcification in the tunica and 2 within the epididymis. Of the testicular calcifications, 3 had bilateral calcifications and the remaining 11 cases had unilateral calcifications. Two cases of unilateral calcification were associated with tumours and one case was associated with cystic changes in the testis. One interesting case of bilateral microcalcifications associated with hyperparathyroidism, not reported in literature so far.

Conclusion

Sonography is a reliable method to detect testicular and extra testicular calcifications with high degree of confidence. All cases of testicular calcification should have follow up scans. One case of bilateral testicular calcification was a known case of hyperparathyroidism, an association previously unreported.

RAD P04 (R134)

THE CT APPEARANCES OF CAECAL VOLVULUS.

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Caecal volvulus is uncommon and is the cause of intestinal obstruction in only 1 to 3% patients. Diagnosis is not difficult if the classical textbook plain radiographic findings are present in a patient with appropriate clinical signs and symptoms. Occasionally the clinical scenario is misleading and other methods of investigation such as ultrasound or CT are performed initially. The purpose of this poster is to present three such cases of caecal volvulus, who underwent CT prior to plain abdominal radiographs.

Learning objectives:

- 1) Describe the CT features of caecal volvulus.
- 2) Identify underlying aetiological underlying factors.
- 3) Emphasise the primacy of the plain abdominal radiograph in the radiological investigation of caecal volvulus.

RAD P05 (R225)

DRAINAGE OF MEDIASTINAL ABSCESS UNDER CT GUIDANCE - CASE REPORT

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We present the case of 36 years old lady with multisystemic problems presented with peripheral vascular disease, mild chronic renal failure, aneurysm of Sinus of Valsalva on the right side and cystic formation in the mediastinum. The latter finding was known since 1992, US of the heart showed 45 x 37 mm saccular lesion extending from AV root into atria (left>right). Left ventricular global function was normal and no regional asymmetry was present. No signs of left ventricular hypertrophy were present. On the US examination of her heart dated 02/04/1997 the mentioned cystic structure was confirmed measuring now 52x60 mm which seemed to be in the inter atrial septum below the aortic root, it was protruding into both atria and probably in the aortic root which was slightly dilated. There was no flow in the formation, but there was flow around it. On the colour Doppler study there was no flow in the formation.

During the elective surgery of the right Sinus Valsalva aneurysm biopsy was taken from the ascending aorta which was with poor quality and dilated. The histology came Forme Fruste of Marfan's Syndrome with DD of Erdheim's cystic medial degeneration.

Post surgery she started spiking fever up to 104 F. CT scan done was almost certainly in the favor of mediastinal abscess, although the pointed lesion was actually present in the mediastinum since long time ago!?

Drainage of the cyst measuring approx. 50 mm across the diameter lying between the root of the aorta and right pulmonary artery was performed under CT guidance with right parasternal approach in local anesthesia successfully. Large 14 F soft drain was placed in the cyst and around 15 mls of dark thick bloody fluid was aspirated, Microbiology showed mycotic abscess. After i.v. antimycotic treatment patient recovered completely and was afebrile and well for the period of 6 weeks. She started spiking again. The surgical team decided to explore the mediastinum in the view of removal of the abscess. The finding of the exploration was negative. The cystic formation was there but sterile and empty. Patient is doing well and stable so far.

RAD P06 (R140)

AN IVU IS THE INVESTIGATION OF CHOICE IN RENAL COLIC IN PREGNANCY

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Introduction: There has traditionally been a resistance to an IVU as the investigation of choice in renal colic during pregnancy because of the risk of radiation exposure to the fetus. We believe the IVU yields valuable information as to determine management successfully.

Method: All patients presenting in pregnancy with renal colic underwent an IVU. This consisted of a single plain film and a 30 minute film after injection of contrast. All patients underwent urine microscopy and culture. Some patients had undergone ultrasonographic evaluation prior to the IVU.

Results: Over the 12 month study period 7 patients presented with renal colic that failed to respond to conservative means. All were midtrimester (median = 32/40 [range 24-36/40]) at presentation. 71% were right sided. The IVU confirmed upper tract dilatation in all cases on the side of pain. The level of obstruction was defined by IVU in 100% cases, (not possible in 71% of ultrasound examinations) and a delayed nephrogram was found in 14% of cases. 1 patient had an obstruction ureteric calculus removed endoscopically after being defined on the urogram, not detected by ultrasound. All patients with persisting hydronephrosis or a severely obstructed system underwent percutaneous drainage via nephrostomy followed by antegrade stenting in a proportion of cases.

Conclusion: An IVU examination in this situation is the investigation of choice, it provides important information which dictates the management of the patient. We believe that this outweighs the minimal theoretical risk to the fetal well-being.

RAD P07 (R143)

RADIOLOGICAL EVALUATION OF UPPER URINARY TRACT CHANGES IN ILEAL CONDUITS

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Aim: To assess the usefulness of retrograde loopography during evaluation of the severity and degree of reflux uropathy and subsequent ease of upper tract voiding in patients with freely refluxing urostomies.

Materials and Methods: 30 volunteers were included in this study. Residual volume in the ileal conduit was assessed by catheter drainage over a one minute interval. Retrograde ileal loop

fluoroscopy was performed initially infusing Niopam 300 freely into the stoma. Subsequent luminal obstruction at the skin level was utilised to opacify upper tracts not shown up by this method. Upper tract drainage was assessed fluoroscopically. Upper tracts not identified by this method subsequently had an IVU.

Results: The age of conduits in 54 kidneys among 30 volunteers varied from 0-22 years. The residual volume averaged 16.63 ml(0-48 ml). 47% were visualised without occluding the stoma and 72% were seen when occlusion was utilised. 28 upper tracts subsequently emptied normally and 8 had delayed emptying. 2 uretero-ileal stenosis were subsequently identified by IVU.

Conclusions: Retrograde ileal loop fluoroscopy is able to demonstrate ileal loop anatomy adequately but we believe that an IVU remains the gold standard in demonstrating the upper tracts and uretero-ileal stenosis in the absence of reflux. The risk of reflux and upper tract dilatation is not related to stomal age or residual volume but is statistically significant in the presence of a short conduit and in conduits fashioned due to neuropathic bladder problems.

RAD P08 (R227)

PREVENTION OF PULMONARY EMBOLISM IN THE PATIENT WITH FREE FLOATING THROMBUS USING TEMPORARY AND PERMANENT INFERIOR VENA CAVA FILTERS

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Pulmonary embolism (PE) is a major cause of death in hospitalized patients. Usual treatment of PE is immediate anticoagulation with heparin followed by coumarin which should be maintained at therapeutic levels for at least six months. However, anticoagulants are not thrombolytic agents and thus they do not treat the thrombus but their purpose is to inhibit propagation of thrombus.

On the other hand, venous interruption procedures may be indicated for venous thromboembolism (VTE) when anticoagulation is ineffective, unsafe, or in cases of recurrent PE and may also be appropriate in patients who have not had a documented embolic event. In cases with septic thrombophlebitis, free floating thrombus (FFT) in common femoral and/or iliac vein and/or IVC, and in patients with documented DVT who, because of reduced pulmonary reserve would not survive a PE, should all be considered for IVC filter placement.

In our department for the past three years 27 IVC filters have been placed using percutaneous transfemoral and transjugular approach.

We present the case of a 70 years old lady who presented with severe right lower limb swelling. Phlebography indicated FFT in the ileofemoral segment that was confirmed by Doppler US later. Temporary IVC filter was placed, using right transfemoral approach. Phlebogram performed one week after the intervention revealed significant amount of emboli in the basket and presence of multiple thrombi along the shaft of the temporary IVC filter. Therefore, second intervention was indicated and it was replaced with permanent IVC filter by transjugular approach and using dedicated retrieval set. One year follow up shows proper position of the filter, and the patient clinically and subjectively well.

The presence of thrombi around the shaft of the temporary IVC filter was certainly filter provoked and the origin of the emboli entrapped in the basket is equivocal. The question is should the permanent IVC filter be the first line treatment in selected patients.

PHA P01 (R036)

ERGONOMETRICS OF A HEALTH-CARE PRACTICE

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Management aspects in the setting of a health-care practice were thought to be outside the dignity required in the area of health-care. Today, the ergonometics in the setting of a practice together with professional services provided are integral to the success of a health-provision service. The aims of the study were to identify patrons' view of a specific community pharmacy, re-organise the management of the pharmacy and subsequently re-assess the views of patrons.

Personal interviews were carried out with 120 patients before the commencement of the study and after the re-organisation. The display of pharmaceutical and non-pharmaceutical products was improved. Space was allocated in direct proportion to the anticipated sales planned. Protocols on the day-to-day tasks required for the running of the pharmacy were compiled and distributed to the pharmacists practising in the pharmacy.

After the re-organisation, an increase in the number of patrons who visit the pharmacy to buy non-pharmaceutical items was recorded. Patient satisfaction on the range of pharmaceutical and non-pharmaceutical items increased by 20% and 57% respectively. Also after the re-organisation 54% of the patrons stated that the overall impression of the pharmacy was very good. The development of protocols contributed to the efficient running of a community pharmacy especially when the pharmacy is attended by more than one pharmacist.

The organisational aspects of a practice are becoming more relevant today especially considering the increased demands of health-care patrons. An improvement in the organisation of health-care practices in Malta is already evident. This often entails a significant investment. The carrying out of such an exercise in a professional and scientific manner is of benefit both to the practitioner and to the clients.

PHA P02 (R037)

COST OF MEDICINES

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Health-care expenditure varies between European countries with France and Germany topping the list of health expenditure while the United Kingdom and Spain are amongst the lowest spenders. Also the price of medicinals varies from country to country. This may be due to marketing policies and techniques employed by the manufacturers as well as to country specific factors such as the costs of distribution and basic cost of living. Equity in access to treatment for a particular condition is also jeopardised by variation in income level and disposable income. The price of a medicine in one country can be as high as ten times in another. A comparative measure of treatment costs for specific disease states in different European countries is established. This may then be applied to comparisons in different world regions.

It is proposed that a basic model to approach the complex question of the incidence of the cost of medicines in various countries is developed. In the model, costs of drug therapy are measured in terms of nanograms, milligrams and grams of gold. Consequently, a gold standard for cost of drug therapy can be worked out independently of the country where the assessment is undertaken. The compilation of this index would be useful to establish the true relative cost and therefore the equity of therapy costs for patients irrespective of their country of residence. A 'global' index of cost of drug therapy, the content of which should neither be specific to a currency nor to a

particular country, generates a single number which reflects the relative value attached to the cost of a medicine.

PHA P03 (R038)

PRODUCING AND EVALUATING HEALTH PROMOTION MATERIAL FOR USE IN A COMMUNITY SETTING

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One major contribution by health professionals towards maintenance of good health is dissemination of health-related information. This is achieved through verbal communication or through the distribution of printed material such as leaflets and newsletters. The language used has an effect on the successful transmission of the message to patients.

A monthly newsletter was distributed from community pharmacies to patients attending the pharmacy. No charge was made for the newsletter. The newsletter covered a range of topics which were subdivided into five categories namely healthcare, healthy dietary practice, treatment of common ailments, paediatric care and general information. The first 14 issues were produced in English and a further 14 issues were produced in Maltese. Response was collected by asking readers to fill in a short questionnaire and to deposit this in a comments box made available at the pharmacies from where the newsletters were distributed.

The majority of respondents found the newsletter very interesting. Although newsletters produced in English were well received by patrons, respondents preferred Maltese as a medium for transmitting health-related information. The newsletters strengthened the relationship between the pharmacist and the patients. The newsletters served as a means to initiate health-related verbal communication between the pharmacist and the patients.

PHA P04 (R039)

DEVELOPMENT OF SPECIALITY FORMULARIES

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An earlier study undertaken by the department led to the development of a formulary for a specific community pharmacy. This formulary resulted in improved communication between prescribers and pharmacists. Following the success of this formulary, the aim of this study was to develop formularies for speciality areas within the same community pharmacy.

Three specialised formularies for Footcare and Orthopaedic items, Dental products and Baby Care items were developed. The formularies were updated on computer and a print-out made available every 3 months. The formularies were developed for a community pharmacy where a formulary system was already in use. The specific areas were chosen because cooperation and evaluation could be obtained from the podologist, the obstetrician and gynaecologist, and the paediatrician who held regular clinics in the same pharmacy. Changes occurring in the formulary issues were studied. The formularies were evaluated through discussions held monthly with both prescribers and with pharmacists practising in the pharmacy.

The formularies were very well received by both the pharmacists and prescribers. It was established that the formularies were a useful tool which presented specific concise information on the items used for the speciality. Formulary systems in community pharmacies may be

developed to include the compilation of specialised formularies pertaining to areas of interest to the particular pharmacy. The development of these formularies improved the service provided by the pharmacist and enhanced the development of a team-work approach between pharmacists and other health practitioners.

PHA P05 (R041)

PERFORMANCE-BASED ASSESSMENT INSTRUMENTS

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The process of validation is used in the field of analysis and in the development of questionnaires and measurement tools to demonstrate that the instrument or method under scrutiny measures what it purports to measure. In this study the concept of validation was applied to the area of pharmacy practice to monitor the standards of professional services provided. The aims were to develop Validation Tools which are valid measurement instruments of the impact of the community pharmacist on patient care and to evaluate the validity and reliability of the Validation Tools themselves.

Five validation tools were developed to evaluate the setting of the community pharmacy and to appraise the processes of dispensing, responding to symptoms and communication with patients. Face and content validity of the tools were assessed through an organised review of the tools by a specially set panel discussion. To assess inter-rater reliability, the validation tools were used in ten community pharmacies by two different raters. The pharmacies were selected randomly two from each district into which Malta is subdivided for health purposes. Factor analysis was carried out using BMDP software. Correlation coefficients were used to assess inter-rater reliability. Internal consistency was measured using Cronbach's alpha. The correlation coefficients for each tool were found to be high ($r_s > 0.70$). Internal consistency for the tools was also high ($\alpha > 0.80$).

The Validation Tools were shown to be valid and reliable instruments which can be used to validate the intervention of the community pharmacist. The Validation Tools may be used by individual community pharmacists or by professional bodies to appraise professional services provided. Better patient outcomes may be achieved by having health professionals who can measure the impact of their service on patient care.

PHA P06 (R042)

THE INFLUENCE OF THE MEDIEVAL MILIEU ON MODERN AND CONTEMPORARY USE OF MEDICINES

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Between 1450 and 1979, the number of community pharmacies increased by 127. The population per pharmacist ratio decreased by 77% from 1861 to 1995. In Malta the pharmacy profession was male dominated up to 1979. The first recorded female pharmacist practised in 1861 but it was after over sixty years that other female pharmacists graduated. Since 1450 the Maltese pharmacist prepared medicines, dispensed prescriptions, attended ward rounds, kept patient medication records and inspected drugs. With Malta becoming a British colony in 1800, drugs developed by the pharmaceutical industry in the United Kingdom were introduced in Malta a few years later. Reviews of archives and manuscripts were undertaken and interviews were

carried out with seven pharmacists who started practising as community pharmacists around 1930.

By 1938 sulphonamides were extensively used in Malta and penicillin was first used in Malta as early as 1945. During this period many medicines were still extemporaneously prepared by pharmacists in community pharmacies for specific patients. As industrial manufacture of medicines expanded after the war, manufactured medicines became the mainstay of treatment, providing through quality control an improved consistency in therapeutic effect. The tragedies caused by thalidomide and other chemical entities forced governments and industry to establish regulatory mechanisms and the community pharmacist focused on compliance and patient care.

In summary the following are chronological highlights in the developments influencing the use of medicines in Malta: ♦1532-holy infirmary established at Birgu, ♦1725-medicines dispensed free of charge to various institutions, ♦1832-first government dispensary opened, ♦1950-Out-Patients Dispensary at St Luke's Hospital major supplier of pharmaceutical services, ♦1968-separate licensing board established.

PHA P07 (R253)

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Malignant melanoma is one of the leading causes of cancer. The aims of this project were to relate the antimelanoma activity of Bacillus Calmette-Guerin (BCG) vaccine with its fibronectin-binding properties and to formulate gelatin nanoparticles capable of mimicking the activity of BCG.

The molecular weight profile (MWP) of aqueous gelatin was sub-divided into fractions by chromatography and the effects of time, temperature, pH and desolvation on the MWP investigated. Dilute aqueous gelatin solutions denatured when incubated above 37°C, and renatured optimally between 7°C to 20°C at a pH of 5. When gelatin solutions were mixed with aqueous ethanol, high molecular weight fractions precipitated at a lower ethanol concentration, maximum precipitation occurring at pH 5.0. Based on this information, a robust method for the optimal production of dispersions of non-aggregated gelatin nanoparticles of diameter 220 to 250 nm was developed.

The fibronectin-binding properties of aqueous gelatin solutions, gelatin nanoparticles, Tice BCG vaccine and PS1 (an antineoplastic glycan from BCG) were compared by immunoassay. PS1 did not bind to fibronectin, whereas the aqueous gelatin solutions, gelatin nanoparticles and BCG all bound to different extents. When tested against a murine B16-F0 melanoma model *in vivo*, BCG vaccine exhibited antimelanoma activity but PS1 was ineffective, suggesting that the activity of the vaccine is not due to PS1. Gelatin nanoparticles also interfered with tumour development, indicating that BCG activity may be partly related to its ability to bind fibronectin. Dilute aqueous gelatin solutions were inactive. Thus, a relationship may exist between the spatial dimensions of the fibronectin-binding entities and their ability to interfere with binding of melanoma cells to fibronectin. This inhibition deprives the melanoma cells of extracellular signals necessary for tumour development.

PHA P08 (R254)

CLINICAL CONSIDERATIONS OF ATMOSPHERIC LEAD CONCENTRATIONS IN THE MALTESE ENVIRONMENT

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The relationship between ambient air lead concentrations (PbA) and blood lead concentrations (PbB) was investigated in 52 adult, non-occupationally-exposed Maltese subjects from 3 localities with different degrees of urbanisation and traffic density (Phase I); subsequently, 39 adults from the same group were monitored over a period of one year (Phase II). Male PbB were significantly higher than female PbB ($p=1.12 \times 10^{-5}$). Results from Phase I showed no PbB differences arising from locality with respect to degree of urbanisation and proximity to heavy traffic. Significantly higher PbB were observed in drivers and bread consumers. PbA at both urban and rural sites were comparable to other European countries. PbA was related to traffic density by a non-linear relationship ($R^2=0.8835$).

The lack of any detectable PbA-PbB relationship was attributed to the fact that the air samples could not account for the contribution of non-inhalatory routes of PbA entry into the body (ingested dust and/or dust-contaminated food) as well as not being truly representative of the different PbA environments the subjects were exposed to during the day. However, PbA and PbB exhibited similar seasonal variations with a peak occurring in September, which may have been caused by increased lead exposure due to both meteorological and anthropological factors.

A third of the Phase II subjects had mean annual PbB exceeding 20 μ g/dL. At this concentration, lead exerts subtle effects on haem synthesis, blood pressure and brain phosphokinase C. Infants, whose PbB are often similar to adult levels, may thus be more vulnerable to CNS disorders such as IQ, hearing and growth repression, in addition to biochemical effects such as pyrimidine-5'-nucleotidase and δ -aminolaevulinic acid dehydrase.

PHA P09 (R195)

HSP RELEASE IS DEPENDENT ON THE LEVEL OF CELLULAR PRE-CONDITIONING AND NOT ON THE TYPE OR SEVERITY OF THE TRIGGERING STRESS

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Heat Shock Proteins are produced intracellularly by all living cells in response to physical and chemical changes in their extracellular environment and form part of the common cellular defense mechanism. This trial is part of an ongoing study investigating the effect of preconditioning on this cellular stress response

A number of individuals were exposed to various physical stresses including heat, cold, pressure, hyperoxia and physical exertion. Sequential blood samples were taken before, during and following the stress exposure and examined for levels of HSP 72 and 27. The same procedure was repeated after a week following preconditioning of the subjects using the agent TEX-OE.

A rise in HSP production was noted following all the stress episodes. No significant difference was recorded in the rate and level of HSP produced by the different stress mechanisms in either the preconditioned or the non-preconditioned set. The preconditioned set resulted in an earlier and higher level of HSP production when compared to the non-preconditioned set.

Further studies will be carried out to clearly define this effect and the hypothesis that substance induced preconditioning will enhance the protective effect of these group of proteins.

PHA P10 (R034)

THE EFFECTS OF CUCURBITACIN E ON THE PROLIFERATION OF PROSTATE AND BREAST CANCER CELL LINES, AND PERIPHERAL T-LYMPHOCYTES

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Cucurbitacin E (CuE) is a cytotoxic tetracyclic triterpenoid, extracted from *Ecballium elaterium*, a local wild medicinal plant. We have previously demonstrated that this compound is effective against ovarian cancer (OV_95_CC3) and not cytotoxic to fibroblasts (L929) *in vitro*.

Aims: To determine the cytotoxic effects of CuE on prostate (PC-3), breast (ZR-75-1) cancer cell lines and human peripheral T-lymphocytes, *in vitro*.

Methods: The cultured cells were treated with different drug concentrations and the total counts, viability, cytotoxicity, proliferation, cell morphology and apoptosis, were followed for a period of 72 hours. Control, untreated cells were assayed likewise.

Results: CuE exhibited a marked effect on PC-3 cells at a median inhibitory concentration (IC₅₀) of 9.2 nM and a moderate effect on ZR-75-1 cells (IC₅₀ = 0.2 µM). This was reflected in the fact that the cytotoxicity increased by 32.29 % and 37.74 % for the respective cell lines (p=0.0019, 0.0006, respectively, v=13), while the proliferation was inhibited by 54.75 % and 52.82 % respectively (p=0.0031, 0.0039, respectively, v=13), as compared to the controls. Morphologically, the cells exhibited changes such as the loss of the spindle shape in the case of the PC-3 cells and the presence of binucleated cells in the case of ZR-75-1 cells. Surface blebbing occurred in both cell types. The characteristic DNA ladder, the hallmark of apoptosis, was exhibited by the treatment on both cell lines. Negligible cytotoxic effects were observed on the human T-lymphocytes (p=0.9242, v=13).

Conclusions: These results indicate the potential effects of CuE as an antiproliferative agent on human cancer cell lines, without a corresponding effect on normal human T-lymphocytes. Further studies shall be undertaken on other types of cancer and normal cell lines.

PHA P11 (R232)

SCREENING FOR ALLERGEN SENSITIVITY IN ASTHMA PATIENTS

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The overall aim of the present study was to determine, through skin prick testing, which patients suffering from asthma, attending the outpatients asthma clinic at St. Luke's Hospital, would benefit most from allergen control strategies included in their management plan. The level of atopy in the asthmatic population sampled was also compared to that of a control group matched for age and sex and free from allergic diseases. Patients were skin tested with a battery of allergens which included house dust mites, animal dander, pollens and moulds using histamine as a positive control and diluent alone, as a negative control. The majority of participants in both the asthmatic and control groups, were below the age of 30. The screening of Maltese asthmatics revealed trends

similar to other populations reported in the published literature. The most prevalent allergens in asthmatics were found to be house dust mites and animal dander. The study also uncovered a comparatively high level (29.1%) of sensitisation to the mould *Alternaria alternata*. Atopy, as well as sensitisation to indoor allergens in asthmatics, was found to decrease with an increase in age of onset. However sex did not have any influence on these factors.

PHA P12 (R040)

MANAGEMENT OF ACNE IN A COMMUNITY SETTING

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Acne vulgaris is a common skin disorder affecting young adults. The aims of the study were to determine levels of compliance of acne patients and possible reasons for non-compliance and to assess the knowledge of pharmacists on the management of acne.

Acne patients, (120) aged between 14 and 25 years, were recruited from eight randomly selected community pharmacies. The patients were interviewed and graded according to the American Academy of Dermatology Consensus Conference on Acne Classification Washington 1990. Data collected included possible triggering factors of the acne. Eighty community pharmacies were randomly selected and personally visited. The community pharmacists accepting to participate in the study were presented with photographs showing different stages of acne and their response was recorded. The counselling provided by pharmacists in response to the photographs was assessed on the basis of protocols compiled for the study.

The triggering factors for acne most commonly identified by patients were menstruation and stress. Of the pharmacists interviewed, 32% would give advice and of these 50% would give proper advice. There is room for improvement in the amount and quality of advice given by community pharmacists on acne.

PED P01 R201

DISTRIBUTION OF TOTAL AND LIPOPROTEIN CHOLESTEROL AND TRIGLYCERIDE LEVELS IN MALTESE CHILDREN.

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Most disorders of lipid metabolism such as heterozygous familial hypercholesterolaemia (FH) are associated with extreme changes in cholesterol and triglyceride concentrations. High plasma level of cholesterol and its deposition in tendons (xantomas) and in arteries (atheromas), slight elevation of the plasma triglyceride concentration, reduced level of high density lipoprotein (HDL)-cholesterol indicate that the diagnosis of FH is highly probable. The main goal of this work was to establish normal values for total and lipoprotein cholesterol and triglycerides for screening for hypercholesterolaemia and other lipid disorders in early childhood. The complete lipid profile was determined in the cord blood of 802 newborns, 408 males and 394 females. The distribution curves were obtained for total serum cholesterol, total serum triglycerides and serum HDL-cholesterol levels. The mean cholesterol level for males was 69 ± 15 mg/dl, for females it was higher and was 77 ± 18 mg/dl. The mean triglyceride level determined for females was 36 ± 16 mg/dl and for males was 35 ± 13 mg/dl. For males, the mean HDL-cholesterol level was 25 ± 4 mg/dl and for females it was 27 ± 7 mg/dl. The results obtained for the distribution of lipids adjusted with the reference

ranges for laboratory tests for cord blood, confirmed the earlier impressions of age-related changes in serum cholesterol levels and demonstrated different trends in males and females. According to the obtained results of distribution of lipids, and considering the levels of cholesterol of 69mg/dl for males and 77mg/dl for females as normal ones, the criteria for cord blood screening for hypercholesterolaemia can be offered for Maltese children.

PED P02 (R176)

REVIEW OF DEVELOPMENTAL SURVEILLANCE AT WELL BABY CLINICS

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A developmental screening programme for children, newborns to three years of age, is carried out in the various Health Centres in the Maltese Islands. This is undertaken at the Well Baby Clinics as part of the community paediatric services, originally established in 1985. A survey of the yearly attendance between the years 1993 and 1998 of both new cases and follow ups including those that require review examination was carried out. The survey also analysed cases referred to other specialised departments such as E N T, Orthopaedic departments and the CDAU for further assessment and management. Substantial fluctuations of total attendance and non-attendance as well as referral rates were noted throughout the study period (1993-1998). This may be due to various factors such as the birth rate and the provision of these services by the private sector. With greater awareness and improved accessibility to community paediatric services, the number of referrals to specialised medical services has increased and diversified. The increased attendance and continuity of care at the Well Baby Clinics appears to approach the objective of the developmental screening programme, which is to detect specific and gross developmental delay and physical conditions early in childhood when these would be more amenable to treatment.

PED P03 (R156)

EXOGENOUS SURFACTANT TREATMENT IN MALTA AND IMPROVED SURVIVAL IN NEWBORN BABIES WITH RESPIRATORY DISTRESS SYNDROME

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Respiratory Distress Syndrome (RDS) is still a major cause of morbidity and mortality in preterm babies despite advances in obstetric care, the use of antenatal steroids and major advances in respiratory support. Exogenous surfactant treatment in RDS has been shown in several large multicentre clinical trials to significantly reduce the mortality and the incidence of pneumothoraces associated with RDS.

In the period 1992-1997, 451 newborn babies were admitted to the Neonatal Intensive Care Unit (NICU) at St Luke's Hospital with a diagnosis of RDS. The survival rate of babies with RDS in Malta prior to and after the introduction of surfactant treatment has never been determined.

The principal aims of this audit are:

1. to determine the trend in the survival of babies with RDS in the period 1992-1997 cared for in the NICU at St. Luke's Hospital, Malta.

2. to establish the current survival figures for babies with RDS at different gestational ages
 3. to analyse the impact of the 1995-1997 exogenous surfactant treatment protocol on the incidence of pneumothoraces related to RDS
 4. to determine the annual consumption and cost of exogenous surfactant for the NICU.
- The study concludes by making several recommendations for a revised protocol on the use of exogenous surfactant treatment in newborn babies with RDS in the Maltese Islands.

PED P04 (R081)

DECLINING MALE BIRTHS IN MALTA

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Demographic studies in several countries have shown a decline in male births in the latter half of this century. This decline is probably multifactorial, and has been attributed to environmental insults produced by progressive industrialisation, with deleterious effects on the male fetus, resulting in a decline in male births. A reduction in sexual intercourse has also been put forward as a potential cause for the observed decline. This study analysis trends in male to female birth ratios, and uses fertility rate as an indicator of frequency of sexual intercourse, over the period 1916 to 1995. Overall, the ratio showed no significant correlations with time. However, over the period 1941 to 1995, a significant decline in the male to female ratio was observed, from 0.520 to 0.515 ($p=0.00016$). A significant decline in the fertility rate was also noted, from 15.0 to 8.3/1000 female population aged 15-44 years ($p=0.03$). However, there was no significant correlation between male to female ratio and fertility rate for the entire period, or for the period with the highest decline in male births (1976-1995). In conclusion, this study confirms the findings of previous studies carried out in industrialised countries that have shown a decline in male births over the previous half century. However, the hypothesis that this decline may be related to a reduction in frequency in sexual intercourse is not supported.

PED P05 (R188)

CHILDREN'S RESIDENTIAL HOMES IN THE MALTESE ISLANDS

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A demographic study of children's residential homes in the Maltese Islands, carried out in 1996/97 revealed a total of 309 children, aged 0-16 years residing in these Homes, equivalent to 4.2/1000 of the Maltese child population. Approximately 52% of these children were in the younger age cohort of 0-8 years. Most of the carers were females and their experience varied from being dedicated congregational nuns to professional nurses and social workers. A number (14.5%) of the children in residential homes were under a Care Order. The most common reasons for admission into residential care are single parenthood (25%), separated parents (19%) and parents with inadequate skills (19%). Admission 'medicals', when performed, rarely included a developmental assessment and the use of growth charts. Medical review examinations were not being done regularly but performed only when required. Dental check ups were done more regularly; 30% of children having a check up every 6 months. Behavioural problems were the commonest conditions, affecting 20.7% of all children followed by chronic bronchial asthma

present in 7.4%. Developmental delay (global or specific) was reported in 23.3% of the children under the age of 4. This study has shown that residential care is the predominant form of substitute care for disadvantaged children in Malta and Gozo, with fostering and adoption being used to a much lesser degree. The demography of the child population in residential homes in these Islands contrasts with that of other Western countries such as the UK, where residential care for children under the age of 5 years is now a rarity. From the data collected, it was evident that medical supervision is minimal, requiring further improvement. A standardised medical and developmental assessment has since been established in children's residential homes in the Maltese Islands, the objective being that this service forms an integral part of the substitute care that is currently provided.

PED P06 (R024)

SOCIO – CULTURAL IMPLICATIONS OF CEREBRAL PALSY IN MALTA

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The importance of socio – economic factors in the aetiology of Cerebral Palsy in 134 cases born during the ten year period 1981 – 1990, was analysed in a retrospective study of children born in Malta and Gozo. The vast majority (63.4%) of C.P. children hailed from the lower social class E (i.e. unskilled workers), followed by class D (i.e.: skilled and unskilled workers) with 19.4%, while 3.73% and 4.47% of cases hailed from the upper two social classes A and B respectively. Furthermore, the Chi – square Goodness of Fit for the prevalence of cerebral palsy in social class E as compared to the upper four social classes gave a value of 202.46 (using 4 degrees of freedom) with a resulting p value of <0.0001 . The prevalence of C.P in the lower social class showed a statistically significant association with socio – economic status as compared to the upper four social classes.

The economic and housing problems faced by these families, together with an analysis of the parents' attitudes towards further pregnancies following the birth of the handicapped child were looked into. 71.3% of the parents required extra expenditure, while 45.8% of the fathers had to change their job or make special work arrangements. 3.7% of the mothers were engaged in profitable employment. 57.4% of all affected families in the study lived in their own house, while 16.1% depended on social housing accommodation. 42.5% of the parents had a negative attitude towards further pregnancies in contrast to 26.8% who had a positive attitude. 30.6% failed to answer.

These figures might suggest that what is lacking in some of these families, and what pulls them down the social scale might not be the availability of financial resources but inadequate knowledge of how to manage the resources at their disposal. It is therefore the role of the Community Child Health Officers to concentrate more on those commonly arising problems met in such unfortunate circumstances with screening and referral of high risk cases to specialised community centres. Through liaison with the social welfare department, special services should be designed on a national scale in Malta, in such a way that they are available to the high risk families living in deprived areas. In this way those suffering socio-economic disadvantage, might be assisted and directed in the proper management of their resources through effective medical intervention.

PED P07 (R025)

CEREBRAL PALSY - THE SITUATION IN MALTA AS COMPARED TO OTHER COUNTRIES

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Malta is a newly emerging developed country which has experienced a rapid improvement in the health status of its infants and children. This retrospective cohort and case - control study reports the prevalence and epidemiology of cerebral palsy in Maltese children during the 10 year period 1981 - 1990, in a geographically defined and stable population that has undergone rapid economic change in the last 30 years. 134 out of 55,200 Maltese children born in Malta and Gozo in the birth years 1981 - 1990 inclusive fitted the case definition of cerebral palsy. Cases were allocated to prenatal, perinatal and postnatal groups according to strict criteria and to various CP syndromes using the Swedish classification. The period prevalence rate was calculated. 134 controls, matched for sex and born immediately before or after the index cases in the same hospital, were selected. Data related to risk factors were extracted from health records and collected by interview with parents/carers. Unadjusted ORs with 95% confidence intervals for a range of risk factors were calculated. For risk factors with a relatively high prevalence in the population such as preterm and low birth weight, ORs were calculated from case control data. For low - prevalence risk factors such as breech presentation and multiple pregnancy, ORs were calculated against whole population data for the 10 year birth cohort. The results were in turn compared with those of industrialised developed and developing countries. The period prevalence rate for CP in the Maltese population was 2.4 / 1000. 66 cases (49%) were judged to be of prenatal origin, 47 (35%) of perinatal origin, 9 (6.7%) of postnatal origin and 12 (9.3%) were undifferentiated. 69 cases (52%) were classified as Spastic Tetraplegia, 23 (17%) as Spastic Diplegia, 15 (11%) as Spastic Hemiplegia and 27 (20%) were shared between the remaining 5 categories. Unadjusted ORs for cases compared with controls were 6.45 (3.03, 14.0) for Birth Asphyxia, 11.78 (4.39, 39.30) for Preterm delivery, 6.79 (3.0, 15.79) for Low Birth Weight and for cases compared with the whole 10 year birth cohort were 6.17 (2.92, 12.57) for Multiple Pregnancy and 3.09 (1.23, 7.28) for Breech presentation. 85 (63.4%) of cases occurred in the children of unskilled workers against an expected value of 31 (23%) based on the proportion of unskilled in the Maltese population. The prevalence rate of CP in the geographically defined stable population of Malta was similar to that in the UK and higher than that for Sweden but the rates for different types of CP were markedly different from most developed countries with a higher rate of spastic tetraplegias. Risk factors were as expected and similar to those reported from other developed countries. Prevalence data for less developed countries, though less reliable, suggest a higher prevalence. The study shows a very strong social gradient with a higher than expected proportion of children born to unskilled parents.

PED P08 (R059)

NECROTIZING ENTEROCOLITIS IN AN EIGHT-WEEK OLD WITH CYSTIC FIBROSIS.

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Necrotizing enterocolitis (NEC) is the commonest acquired gastrointestinal emergency in the neonatal intensive care setting. Most cases of NEC occur in the first week of life in premature neonates weighing less than 2 kilograms. NEC presenting at a later stage amounts to less than 5%

of the total and is usually associated with significant cardiac or respiratory problems. This case presentation is the first to describe late NEC in an infant with cystic fibrosis.

PED P09 (R058)

**BALLOON DILATATION IN OESOPHAGEAL STRICTURES IN CHILDREN –
CASE REPORT**

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A one-year old boy with oesophageal stricture secondary to oesophageal atresia is presented. The stricture was dilated over a period of 8 months using a disposable Wanda balloon under image intensification. At 3 months follow up the child has a patent oesophagus on endoscopy and swallows solids.

The literature on the subject is reviewed.

PED P10 (R054)

EATING HABITS OF CHILDREN IN HOSPITAL

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The eating habits of children who were in-patients on the paediatric wards at St. Luke's Hospital for more than 2 days were assessed by means of a standardised questionnaire. One hundred and four children were included in the study, 62 boys and 42 girls. Their age varied between 3 and 13 years. The children's response to hospital food as well as their personal likes and dislikes were assessed.

PED P11 (R056)

CLINICAL FEATURES OF INTUSSUSEPTION

MarieKlaire Farrugia, Chris Fearne. Paediatric Surgical Unit, St. Luke's Hospital, G'Mangia, Malta

The case notes of 34 children with a diagnosis of intussuseption were retrospectively analysed. These comprised 22 boys (65%) and 12 girls (35%). The average age was 2 years and 3 months with a range of between 4 weeks and 13 years. However 48% of all cases occurred in infants aged 4 to 5 weeks. The clinical features, mode of diagnosis and the management of these patients is described. Contrary to classical teaching only 10% of the cases had red-current jelly stools on presentation.

Acknowledgements: Health Information Unit

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