

REVIEWS AND CASE REPORTS

P.001

A Paleolithic or a Mediterranean diet?

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Introduction: Diabetes mellitus is a global epidemic. Its development is the result of a combination of risk factors including obesity and an inappropriate lifestyle. Various dietary patterns had been studied including a Mediterranean diet, a high protein and low carbohydrate diets. The Mediterranean diet has been stated to be the best diet to follow for maintenance of glucose control. A Paleolithic diet, although its main macronutrient is protein, has not been readily studied in comparison to a Mediterranean diet and its effect on glucose management.

Methods: A literature review on the dietary evidence of the Paleolithic diet and Mediterranean diet was performed. This was compiled using Google scholar and PubMed databases with the search years 1990 – 2014. An individual dietary review on each diet as well as dietary comparisons were performed to establish which diet is suggestive for diabetic control.

Results: Analyzing the data available resulted in both diets showing good glycemic control as well as a decrease in HbA1C and lipid profile values, even though the main macronutrients differ from each other. Both diets showed no difference in the body's metabolism including the renal function.

Conclusion: It appears that a diabetic patient has the luxury of a dietary choice and still be able to maintain a good glycemic control. Although more research is needed, the key is in the understanding the amount and type of food consumed and to stay away from a Western diet.

P.002

Fasting or Non-Fasting? An Insight Into Lipid Profile Testing

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Introduction: It is common practice for physicians to advise patients to fast for 14 hours prior to lipid profile testing, particularly for the Triglyceride component. In preparation for a large prevalence survey, a literature review was performed to find the evidence base for this requirement, given that the need for fasting may negatively affects response rates.

Methods: A literature review on the evidence for the fasting time requirement for an accurate lipid profile result was performed. This was compiled using Google scholar and PubMed databases and the search years were from 1990 to 2014 using the following keywords: "fasting times for lipid test / triglycerides".

Results: A 14-hour fast lacked an evidence base. Non-fasting states appeared to predict cardiovascular risk better when compared to fasting states. An assessment of numerous national studies concluded that a minimum fast of 7 hours for females and 8 hours for males would be sufficient to ensure a valid Triglyceride level. Most recent research suggests that the same prognostic value would be obtained irrelevant of whether a patient fasted or not. Other factors (e.g. supine position) may have greater influence on Triglyceride validity.

Conclusion: Fasting for a period of time is inconvenient for everyone and can affect compliance. Simultaneous glucose testing makes the fast worthwhile though non fasting lipid profile testing has more accurate predictive value for CVD risk. It is recommended that national guidelines be updated according to the most recent evidence.

P.003

The adequacy of diagnostic cystoscopic bladder resection specimens

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Introduction: The most important prognostic indicator of bladder cancer is the stage at diagnosis. There is a documented association of increased mortality in patients who have had a

diagnostic cystoscopic resection of bladder cancer with either the absence of detrusor muscle or no mention of its' presence in the pathology report.

Methods: The histology reports and original request forms of all diagnostic cystoscopic resections for bladder cancer taken over a period of one year were analysed to assess for age at diagnosis and sex, whether this was the first diagnosis or not, the grade and stage, the presence or absence of detrusor muscle, whether this was mentioned at all and if it was involved by tumour.

Results: A total of 124 cases of diagnostic cystoscopic resections were included in the study. Detrusor muscle was represented in 53% and was similar to what is reported in the literature. The presence or absence of detrusor muscle was not documented in 35% of cases. This could be due to the fact that the type of procedure documented in the histology request form was not always clear.

Conclusion: The management of patients with bladder cancer is dependent on accurate staging at the time of the primary diagnostic cystoscopic resection. This can be achieved by ensuring that patients with bladder cancer have adequate muscle sampling, that the specimen type is clearly printed in the histology request form, and that the histology reports are standardised to ensure that the presence or absence of detrusor muscle is documented.

P.004

A case of Draged Optic Disc and Macula

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Introduction: A 39-year-old man presented with a 6-week history of occipital headache associated with one episode of diplopia on downgaze. His right eye was allegedly amblyopic.

Methods: This patient's personal and family history is unknown. His general condition was good. Pinhole Snellen visual acuity was 6/12 in the right eye and 6/6 in the left. His eyes were straight in primary position with normal pupil reactions, normal eye movements, and no deviation was detected on cover testing. However, he reported right monocular diplopia on looking down. Slit lamp examination of his right eye showed mild cortical lens opacification with an otherwise normal anterior segment. Fundoscopy revealed nasal dragging of the optic disc and retinal vessels with a 90° counter-clockwise rotation of the macula to a position inferior to the disc. He was managed conservatively with an explanation about this condition.

Results: No further diplopia was reported. Amblyopia was refuted since an underlying organic pathology was found. The patient was lost to follow-up.

Conclusion: A heterotopic macula can cause strabismus and visual impairment, which were absent in this case. The differential diagnosis includes: peripheral Toxocara granuloma, moderate familial exudative vitreoretinopathy (FEVR), and retinopathy of prematurity. Family history, past ophthalmic history, especially of uveitis, and birth history would thus provide important information. If FEVR is a likely diagnosis, genetic testing and assessment of bone mineral density would be indicated.

P.005

Sclerotic Bone Lesions: are they metastatic?

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Introduction: The presence of sclerotic bone lesions on a radiograph is often a worrying finding and a diagnosis of osteoblastic metastases comes to mind. However, not all sclerotic lesions are metastases. One differential worth keeping in mind is osteopoikilosis (OPK).

Conclusion: We report a case of OPK found incidentally in a healthy sixty-five year old gentleman whilst being investigated for an acute inflammatory arthritis of both knees.

P.006

Epidemiological preliminary analysis of vaccination compliance's decrease in Italy

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Introduction: A social trend in portraying vaccines as disease-causing is spreading out: public opinion is pointing at vaccination process as trigger of various diseases - autism above all. Some moral bans results from this unfitting feeling, so more and more parents decide to not vaccinate their children. The prospective coming from this scenario is not comforting. Furthermore, for years, doctors have taken for granted the patients' acceptance to vaccination schedules and at the moment doctors themselves aren't ready to face a similar growing idiosyncrasy and its clinical consequences. On the basis of Italian facts, the authors' purpose is to call attention to this seriousness situation, in order to alert physicians to their upcoming responsibilities: in few years, there'll be a fresh outbreak of vaccine-prevented diseases in outpatient clinics, as well as a new educational campaign will be necessary to make people aware of the meaning of Prevention.

Conclusion: The Italian Society of Public Health (S.It.I.) warned against this serious problem and informed that vaccinations in Italy have decreased in size of 25 percent, in particular with referring to MMRV vaccine. This data will appear as the litmus test of a serious prospective, that provides consequences on individual and public health. Due this perspective, all health-workers can do is to engage in a re-educational role. Physicians have to put into clear words what vaccines are and how vaccination protects health itself. Patients deserve to realize and agree on medical practices: tougher stances seem to be counter-productive.

P.007

Ectopic pregnancy secondary to a left fallopian tube teratoma

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Introduction: Mature benign cystic teratoma is the most common type of germ cell tumour of the ovary, however it may rarely also occur within the fallopian tube. We present a case of fallopian tube teratoma associated with an ipsilateral ectopic pregnancy. There have been six reported cases of fallopian tube teratoma associated with an ectopic pregnancy in the medical literature since 1865.

Conclusion: We present a case of fallopian tube teratoma associated with an ipsilateral ectopic pregnancy.

P.008

Severe Immune Thrombocytopenia and Antiphospholipid Syndrome - a Therapeutic Conundrum.

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Introduction: Here we describe two cases diagnosed with secondary immune thrombocytopenia (ITP) and antiphospholipid syndrome (APS) and the therapeutic dilemma in managing their high risk of both bleeding and thrombosis and the novel use of Rituximab in this scenario. Rituximab seems to be the ideal class of drugs in these cases since it tackles the condition at its roots by affecting the antibody producing cells which are causing the APS and ITP. In fact in our cases, Rituximab achieved an immediate and persistent response, both clinically as well as biochemically. B lymphocytes were depleted from

peripheral blood as was confirmed by flow cytometry. Both our patients remain well, more than a year later, with a platelet count above $150 \times 10^9 / L$.

Conclusion: Up to now, Rituximab has been reserved to the more severe variant of Antiphospholipid syndrome i.e. catastrophic APS (CAPS) with good effect. Even though ours is just a clinical observation and preliminary data, we feel that the role of Rituximab in APS and severe thrombocytopenia is a viable one and merits further study.

P.009

Abernethy malformation type 1A: a case report

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Introduction: Porto-hepatic anomalies including Abernethy malformations (AM) are extremely rare and may result in hepatocellular carcinoma,

Methods: An asymptomatic 14 year old girl on treatment for acne was normotensive, obese (BMI 31) with flank striae, but without hepatosplenomegaly. 'Routine' ultrasound showed markedly abnormal liver echotexture with diffuse increased reflectivity throughout. ALT and GGT were marginally raised. MRI confirmed absence of intrahepatic portal veins with both the superior mesenteric and splenic veins draining separately into the IVC. Multiple arterial enhancing lesions were seen in the portal and hepatic venous phases in both liver lobes, with almost no normal parenchyma. Some exhibited central scarring that enhanced on the delayed venous phase. Diffusion was not restricted. The MR confirmed regenerative nodular hyperplasia secondary to an intra-hepatic Park Type I Abernethy malformation, with an end-to-side shunt between an abnormal portal vein and the intrahepatic IVC. A hypoplastic rudimentary left portal vein arose from this abnormal vein, whilst the right portal vein was absent. Doppler confirmed static/reversed flow in a hypoplastic left portal vein and multiple hepatic venovenous shunts.

Conclusion: 40 cases of AM have been reported and, unlike this case, most experience vomiting, jaundice, dyspnoea and coma at presentation. In AM, poor portal perfusion causes compensatory hepatic arterial flow leading to malfunction, maldevelopment and regeneration with cirrhosis (6%), nodular hyperplasia (16%), hepatoblastoma (4%), adenoma (10%) and hepatocellular carcinoma (27%). Most need correction of the shunt to improve hepatic perfusion, and some may require liver transplantation. This patient was referred to King's College Hospital for further management.

P.010

Suboptimal provision of medications and dietary products for phenylketonuric patients in Malta

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Introduction: In Malta, phenylketonuria (PKU) due to dihydropteridine-reductase (DHPR) deficiency rather than classical PKU, is not screened for at birth. Late presentation with neurodisability ensures a disproportionate demand on health services, compounded by non-adherence to PKU diets and irregular provision of neurotransmitter and cofactor supplementation, highlighted in this study.

Methods: PKU-related prescriptions were analysed for quantity dispensed, where a two month supply was the standard prescription. If a two month supply was dispensed, this represented 100% for that item. Anything less was calculated as a percentage of the two month amount, and this exercise was

performed for all PKU prescriptions over 2009-2015.

Results: Over 18 years, 5 patients with PKU due to DHPR were diagnosed. Of these, 3 siblings emigrated and prescriptions were analysed for the remaining two. All medications were frequently supplied in <2month aliquots: L-Dopa was insufficiently prescribed in 32%, 5-hydroxytryptophan 33% and folic acid 39% of prescriptions. Low protein food was dispensed for <2 month aliquots in 37% and PKU cooler provisions were insufficient in 70% of prescriptions.

Conclusion: Cumbersome dispensing with frequent procurement and 'out of stock' situations result in incomplete prescriptions, with patients missing doses whilst stocks are replenished, often urgently and at much greater cost. Chronic under-provision results in frequent hospital attendances to stock up, increased patient symptomatology as doses are missed and lower compliance with PKU diets. The introduction of new born screening, together with a comprehensive overhaul of the pharmaceutical provision for children with PKU, with effective dietary and medicinal provision at all times is essential.

P.011

Illicit Substance Misuse in Older Adults: The Biopsychosocial Implications

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Introduction: Substance misuse among older adults is a novel phenomenon, attributable to aging of the baby boom population and improved survival of drug users. It will present clinicians with a new treatment population that is more likely to present with physical and psychiatric comorbidities and problematic social backgrounds consequent on a lifetime of substance abuse. This research aims to provide a literature overview of the topic and present findings from qualitative research looking into the social support networks of a cohort of older drug users.

Methods: The research is of a qualitative nature. Ethical approval was obtained from the Foundation for Social Welfare Services and written informed consent from participants. Eight participants recruited from Sedqa Detox Centre participated in a face to face semi-structured interview with the researcher. Topics explored were social support networks over different stages of their life course, physical and mental health problems. Social support networks represent both formal and informal sources. Interviews were recorded, transcribed, coded and themes identified. NVivo9 was employed.

Results: Findings from literature overview confirm this topic remains under researched with a paucity of published data available. Qualitative research highlights the vulnerable nature of social support networks within this population. It also shows the presence of comorbid physical and mental health problems.

Conclusion: This research highlights that policies, both with respect to social services and treatment services, do not identify and cater for the specific needs of this population. Suggestions are made as to how policies may better cater for this population.

P.012

Cystic Lymphangioma of the Transverse Colon in a previously healthy 62 year old male

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Introduction: A 62 years old male presented with a history of altered bowel habit tending to constipation with occasional diarrhoea and episodic abdominal pain.

Methods: Colonoscopy showed a submucosal cystic lesion in the transverse colon which was biopsied. Histology revealed hyperplastic epithelial architecture. PET-CT imaging was unremarkable except for tiny pulmonary lesions. As the clinical differential diagnosis included a mucinous malignancy, the patient was offered an extended right hemi-colectomy. Histology

of the operative specimen confirmed a cystic lymphangioma of the transverse colon.

Conclusion: Endoscopic polypectomy or endoscopic mucosal resection may be recommended for pedunculated or semipedunculated colonic lymphangiomas which are less than 2cm in size. Larger and/or symptomatic colonic lymphangiomas should be treated with a limited bowel resection or tumour resection. A high percentage of patients with lymphatic cysts showed co-existent lesions with colorectal carcinomas present in 7% of patients and colonic adenomas found in 16% of patients.

P.013

Cystic Fibrosis due to $\Delta F508/G1349D$ mutation associated with a mild phenotype that supports gating kinetics of the CFTR channel

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Introduction: Cystic Fibrosis (CF) results from a genetic frameshift mutation in the Cystic Fibrosis Transmembrane Regulator gene. Many culprit gene mutations have been identified in CF, and the natural history, severity and clinical phenotype of this disease is dependent on what particular gene mutation(s) is involved.

Results: An 8 month old Caucasian boy developed clinical signs suggestive of cystic fibrosis, an abnormal sweat test and was found to be heterozygous for the $\Delta F508/G1349D$ state. He initially presented with poor weight gain and loose stools but no respiratory symptoms. Once CF was confirmed, he was commenced on the standard UK treatment protocol including pancreatic enzyme replacement, dietary supplements, antibiotic prophylaxis and physiotherapy. He displayed a mild clinical course with few complications including one episode with H.influenzae infection requiring antibiotics, an orbital mucocele and ethmoid polyps aged two years. He manifested steady weight gain along P25 and remained well with minimal manifestations of his disease at the age of 7 years.

Conclusion: The gating kinetics hypothesis supports the notion of improved Cystic Fibrosis Transmembrane Regulator function that, potentially, could result in CF with fewer complications. Using a patch-clamp technique to isolate the CFTR channel from frog oocytes, the heterozygous $\Delta F508/G1349D$ mutation was associated with a ~10-fold decreased channel response to ATP, compared with 100-fold with other mutations, and fewer sequelae. To-date, 4 children with this mutation in the UK CF database had an improved phenotype, and this raises the dilemma whether to initiate effective but very costly ivacaftor therapy in this mildly affected patient.

P.014

Spontaneous Knotting of a Urethral Catheter in a Neonate

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Introduction: Urethral catheterisation is frequently performed in the younger paediatric population and is generally considered a safe procedure. Intravesical knotting is a rare complication occurring in approximately 0.2 per 100,000 catheterisations.

Conclusion: Infant feeding tubes used as urethral catheters pose an increased risk of intravesical knotting. An excessive length of tubing may cause it to coil on itself and form a knot. Guidelines on insertion lengths of catheters can help healthcare professionals reduce the risk of this

complication. Moreover, one should ensure that indwelling catheters are well secured to prevent further accidental insertion. Resistance during attempts at removal is a sign that should raise suspicion of a knot and further radiological imaging and a surgical opinion should be considered. One should not apply excessive force to avoid urethral injury.

P.015

Atypical Kawasaki Disease with Giant Coronary Aneurysms

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Introduction: Kawasaki disease (KD) may be complicated by coronary aneurysms especially with delayed treatment and atypical cases.

Conclusion: Aneurysms complicate 15-25% of untreated children with KD and in just 5% with IVIg given within 10 days. Aneurysms arise within 4 days of fever peaking at 4 weeks, so may have already developed in this late presenting patient. Earlier diagnosis and IVIg may have limited this complication. Hence, KD (and ECHO) should be considered with unresolved fever-irritability even if strict diagnostic criteria for KD are not met.

P.016

Mitochondrial dysfunction and autism spectrum disorders

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Introduction: Autism Spectrum Disorder (ASD) represents a group of neurodevelopmental disorders characterized by a variable degree of impairments in verbal and non-verbal communication, social interaction, and restricted, repetitive interests and behaviours. The aetiology of ASD is still unclear, however, research indicates that ASDs involve complex interactions between genetic and environmental factors. ASDs may be associated with mitochondrial energy metabolism dysfunction. Several structural and genetic abnormalities and/or exposure to environmental toxins could result in mitochondrial dysfunction (MD). The presence of specific mutations in the mitochondrial or nuclear genome may result in decreased activity of electron transport chain (ETC) and tricarboxylic acid (TCA) cycle enzymes. This was shown by the presence of increased biomarker values such as elevated lactate levels, in individuals with ASD.

Conclusion: Advances in research are being made to determine whether MD is implicated in pathogenesis of ASD or if it is an epiphenomenon. This will enable us to understand better the cause, course and treatment of ASD individuals with MD. Apart from this, a better understanding of the behavioural phenotypes of ASDs would enable an earlier detection and clinical intervention. In addition, the well-being and the quality of life of an individual with ASD depend on the support of the relatives. Therefore the plan for intervention should have a priority for the education of ASD families.

P.017

Systematic review and meta-analysis of mental health risk factors for admission into a nursing home setting

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Introduction: Nursing home use is expected to increase significantly due to demographic changes over the next thirty years, and many systems have been and are being developed so as to provide further care in the community. Given that mental

health problems are significantly prevalent in older persons, this review aims to examine the association and predictive power of mental health problems on nursing home placement.

Methods: The literature addressing the risk of nursing home placement in older persons has been systematically collected, with specific consideration given to mental health disorders which are primarily not cognitive. A total of 2,837 abstracts were reviewed, with 22 articles meeting the inclusion criteria. The range of variables used in the literature were organized according to the mental health diagnosis, and grouped according to ICD-10 categories.

Results: The review shows a significant positive association between psychotic disorders, bipolar disorder and substance misuse and the risk of earlier nursing home placement. A decreased risk of nursing home placement is found in anxiety disorders. A meta-analysis of the five studies examining the hazard ratio of nursing home placement in mood disorder shows a statistically significant increased risk of nursing home placement, whilst the severity of depression is a reliable predictor.

Conclusion: Mental health conditions have a direct and statistically significant impact on the risk of nursing home placement in older adults. Further research would be useful to determine whether the active management of these conditions would lead to a delay or change in the current pattern of admissions.

P.018

Case report: primary hepatosplenic sarcoidosis

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Introduction: A 78 year old female presented with a 10 month history of decreased appetite, lethargy and pallor. This was associated with diarrhea after meals and weight loss of around 9 kg. A smooth liver edge was palpable 2cm beneath costal margin and a tip of spleen was felt on abdominal examination. Her hemoglobin level was less than 7.8g/dL (11.5-16.5g/dL). A chest radiography was unremarkable while an abdominal CT showed multiple splenic lesions. A serum corrected calcium was 2.90 mmol/L (2.05-2.60mmol/L) while serum ACE levels were raised: 85 U/L (20-70U/L). A splenic MRI showed bridging fibrosis of the liver. Ultrasound-guided biopsy of the lesions revealed non-caseating epithelioid granulomata suggestive of sarcoidosis. The patient was transfused two units of packed red cells and prednisolone 20mg daily was prescribed. Her symptoms resolved within 4 weeks while her serum corrected calcium was within reference range on follow-up 12 weeks later.

Conclusion: Pulmonary hilar involvement is present in greater than 90% of sarcoidosis patients. It is essential to consider sarcoidosis as a differential diagnosis of hepatosplenic lesions despite having no abnormalities on chest radiography. Other case reports mention splenectomy as one of the treatments in hepatosplenic sarcoidosis however this patient had a clinical and biochemical remission on a course of oral prednisolone.

P.019

Neonatal threat from maternal leptospirosis: a case report and literature review

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Introduction: Leptospirosis is a globally prevalent zoonotic infection, caused by spirochaetes of the genus *Leptospira*, that can be transmitted vertically. Congenital leptospirosis is challenging to diagnose.

Methods: We describe the challenges in the diagnosis of leptospirosis in a neonate born to an infected Nigerian woman and review all published cases of leptospirosis in pregnancy.

Results: A 32 year old woman with with 34+6 weeks

of gestation presented with a 5 day history of fever, nausea, vomiting and jaundice. Blood results revealed deranged liver function tests, high uric acid, impaired renal function and abnormal clotting. An infectious work up was only positive for Leptospiral IgM antibodies. In view of rapid deterioration in the patient's hepatorenal function an emergency Caesarean section was carried out. The neonate was treated with 7 days of benzylpenicillin since the currently available tests cannot definitely exclude congenital leptospirosis. No *Leptospira* DNA was amplified through PCR. A literature review of leptospirosis in pregnancy showed only 35 published cases with foetal loss in more than 50% of women.

Conclusion: Interpreting leptospiral serology in neonates is challenging in view of difficulty in distinguishing neonatal from transplacentally acquired maternal *Leptospira* IgG and the potential for neonates not to mount an IgM response. The performance of the currently available PCR methods in neonates has not been studied. There is the need for the development of guidelines directing the investigations and management of neonates born to mothers with leptospirosis.

P.020

Allopurinol induced DRESS syndrome - a case presentation in a 91 year old

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Introduction: We report the case of allopurinol induced DRESS (Drug Reaction with Eosinophilia and Systemic Symptoms) syndrome in a 91 year old patient who was admitted with high grade fever and a widespread rash. Laboratory investigations revealed eosinophilia, raised inflammatory markers and deranged liver function tests; including coagulation derangements. On further questioning, it was noted that she had been started on Allopurinol by her general practitioner for raised uric acid 32 days prior to admission. Allopurinol was immediately discontinued and systemic steroid therapy initiated. An immediate improvement in leukocytosis, eosinophilia and liver function was noted, however coagulation derangements took longer to normalise. The rash progressed initially to an erythroderma-like picture, with complete resolution within weeks. In this case study we report the differentials, challenges with diagnosing DRESS syndrome and possible complications of late diagnosis and treatment.

Conclusion: Diagnosing DRESS syndrome can be a challenge given the non specific signs and symptoms. Nevertheless, recognising it in its early stages is essential, given the significant morbidity and mortality if untreated. For this reason, we deemed it necessary to report this case which is not as commonly reported in literature. In the vast majority of cases, allopurinol is considered a safe drug with few reported serious side effects. Minor drug rashes occur in less than 2% of patients. On the other hand, allopurinol is also a known cause of DRESS syndrome. Its use depends on clinical symptoms rather than solely biochemical data. Paying special attention to the drug history of patients is advised.

P.021

Fatigue in rheumatoid arthritis: what is known?

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Introduction: Fatigue is a common symptom in patients with rheumatoid arthritis (RA), and is often unrecognised by health professionals. The estimated prevalence in RA is 40-80%. The aim of this study was to summarise the available literature on fatigue in RA patients and identify areas that require further study.

Methods: A search was made on PubMed and Cochrane Library using the MESH terms "rheumatoid arthritis" and "fatigue". 326 papers were identified on PubMed; 119 papers on Cochrane. From these, papers that were not in English, letters, case reports and comments were excluded. The abstracts of the

remaining papers were reviewed and non-relevant papers were excluded. 49 papers were reviewed in detail.

Results: Fatigue has a multi-factorial aetiology and has been associated with pain, disease activity, physical functioning, anxiety and depression. Conflicting and insufficient evidence is present on the effect of other factors (including inflammation, auto-antibodies, disease duration, co-morbidities, social support and gender). The evidence shows that physical activity, psychosocial interventions and biologic drugs provide some benefit on the level of fatigue in RA. The 20-item Bristol RA Fatigue Multi-Dimensional Questionnaire has been designed specifically to assess level of fatigue in studies on RA and captures the multi-dimensional aspect of fatigue.

Conclusion: Fatigue has a significant impact on RA patients. Multiple factors have been identified as being possible causes and thus potential targets for treatment of fatigue. Further studies on its aetiology and testing of other interventions, such as advice on sleeping patterns, balancing activity and rest, and social support are required.

P.022

An unusual neck lump - a trap for the unwary

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Introduction: Carotid body tumours (CBTs) are rare neoplasms of neural crest origin at the carotid bifurcation. Presentation can vary from a painless mass to cranial nerve compression and is often misdiagnosed as a result of these non-specific symptoms. Though generally benign, morbidity can be significant. The management of two patients with CBTs in Malta were reviewed to highlight disguising symptomatology which may hinder early diagnosis.

Methods: Data was obtained from the patients' files. Real time images of the surgery were captured.

Results: Homonymous hemianopia and a lump in the anterior triangle of the neck were the presenting features of a 56 and a 53 year old female respectively. Diagnosis and pre-operative assessment of Shamblin grade II CBTs was performed using carotid duplex scanning, computed tomography (CT) of the neck and CT angiography. The 53 year old female had unnecessary fine needle aspiration prior to referral. Typical features on imaging diagnostic of a CBT should alert the clinician not to needle this mass due to its vascularity. Intra-operative imaging of CBT excision highlighted the anatomy and surgical technique used. Though this is regarded as a rare, high risk surgery, the procedure was successful with no complications, early discharge and uneventful follow-up.

Conclusion: This case series shows that early surgical management can prevent multiple morbidities due to compression on adjacent structures by the tumour. Additionally, research shows that small tumours have a better surgical outcome.

P.023

Anaesthetic management of a patient with Eisenmenger syndrome for non-cardiac surgery

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Introduction: Eisenmenger syndrome is a severe form of pulmonary arterial hypertension. It is the result of untreated congenital cardiac disease with a systemic-to-pulmonary shunt, leading to multisystem involvement due to progressive hypoxaemia and central cyanosis. We describe the anaesthetic management of a 67-year-old patient with type II diabetes and Eisenmenger syndrome undergoing an elective abdominoperineal resection, total abdominal hysterectomy with bilateral salpingo oophorectomy and bilateral ureteric

stent insertion in view of a rectal carcinoma. On examination she was found to have a loud pansystolic murmur (PSM) radiating throughout the precordium with finger clubbing. A cardiac magnetic resonance imaging (MRI) showed a large (non-restrictive) perimembranous ventricular septal defect (VSD) with bidirectional flow; low velocity systolic left-to-right shunt with Eisenmenger physiology. In view of these findings she was categorised as high risk. However, the patient was independent in her ADLs and had relatively good exercise tolerance. Intra-operatively she was successfully managed with general anaesthesia, invasive monitoring including, Swan-Ganz pulmonary artery catheterisation and transoesophageal echocardiography (TOE), inotropic support and neuraxial blockade for pain relief. Post-operatively the patient was transferred, intubated and ventilated, to the intensive therapy unit (ITU) with a running epidural infusion. She was successfully extubated the same day and transferred to a surgical ward 3 days later. She had no complications and was eventually discharged home.

Conclusion: Anaesthetic perioperative management of adult patients with Eisenmenger syndrome represents a challenge. A multidisciplinary approach is essential and should be directed towards optimizing patients' preoperative status and minimizing haemodynamic and hypoxic intra-operative effects of this syndrome.

P.024

A five year review of exercise-based cardiac rehabilitation

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Introduction: Cardiac Rehabilitation aims to minimise the negative impact of cardiac disease on the physical and psychological capacities of affected patients; in turn improving the quality of life and survival of the patients. Participation in exercise-based cardiac rehabilitation programmes (CRPs) is associated with exercise tolerance improvement, increased ischemic threshold, and improved control of cardiovascular risk factors.

Methods: A literature search of exercise-based cardiac rehabilitation over a five-year period was conducted. All included research covered specific areas including; knowledge & understanding of cardiac rehabilitation; benefits of cardiac rehabilitation; age-related response to CR; cardiac effects and the effect on coronary stents; mortality and morbidity effects; sexual dysfunction and mobility issues; technology benefits; and economics.

Results: Participation in a cardiac rehabilitation programme results in significant improvements in cardiovascular risk profile, functional capacity and quality of life, regardless of age. Despite its efficacy and cost-effectiveness, exercise-based cardiac rehabilitation is undertaken by less than one-third of eligible patients.

Conclusion: Programmes should contain individualised programs designed to optimise physical, psychological, social and emotional status. Comprehensive cardiac rehabilitation should be initiated as early as possible, individualised depending on clinical status of the patients.

P.025

ROHHADNET syndrome

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Introduction: A 6-year old Maltese boy presented with a 6-month history of rapid significant weight gain (10kg), despite substantial dietary measures and physical activity. There were no other symptoms and physical examination was unremarkable. At first consultation, the weight was 36.6kg and BMI 30kg/m², worsening at an alarming rate over subsequent months. Initial baseline investigations only revealed hyperprolactinaemia (2120mU/L) on several occasions. Two

magnetic resonance imaging scans (MRI) of the brain and pituitary (6 months apart) showed no lesions. There was no clinical or biochemical evidence of Cushing syndrome. After a few months, he developed polyuria, polydipsia, and showed slowing in linear growth. Although he was able to adequately concentrate his urine during a water deprivation test, he still developed significant hypernatraemia. A glucagon stimulation test showed a flat growth hormone response (peak concentration 0.54µg/L)

Conclusion: The combination of rapid-onset obesity, hyperprolactinaemia, hypernatraemia and growth hormone insufficiency in the absence of any radiological intracranial abnormality strongly suggested a possible diagnosis of ROHHAD syndrome. As about 40% of affected patients may develop neural crest tumours (ROHHADNET syndrome), he underwent MRI of the thorax and abdomen. This revealed a solitary mass in the right paravertebral gutter, suggestive of ganglioneuroma. ROHHADNET syndrome is an exceedingly rare condition characterised by rapid-onset and inexorable obesity starting in childhood, hypothalamic dysfunction, hypoventilation and autonomic dysfunction with or without neural crest tumours. Diagnosis is based on clinical criteria. Management is supportive and multidisciplinary. To the best of our knowledge, this is the first documented Maltese patient with ROHHADNET syndrome.

P.026

Epigenetics in cancer

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Introduction: The relevance of epigenetic changes in the pathogenesis and progression of cancer remains poorly understood, making this association an extremely active area of research. DNA methylation, histone modification and disturbance of the non-coding RNA are the three primary mechanisms by which epigenetic control operates. Initiation and progression of cancer has been closely linked to the presence of cancer stem cells, believed to be the product of epigenetic deregulation. Moreover, silencing of tumour suppressor genes instigates metastasis allowing for malignancy dissemination. Presently, research is focusing on constructing tailor-made therapy, and epigenetic biomarkers are pivotal in this regard. The authorisation of DNA methyltransferase inhibitors (DNMTi) and histone deacetylase inhibitors (HDACi) in the treatment of specific leukaemias is proof that targeting epigenetic mechanisms is a very promising field in the treatment of specific cancers.

Conclusion: Recent findings are reforming previous solid ground hypothesis such as the case of the emerging theory of obligate haploinsufficiency developed amongst other authors by Knudson. This theory is revising the original two-hit hypothesis proposed by the same Knudson, 40 years before by reporting that silencing of just one TSG via methylation of its promoter region may be even more tumorigenic than a two hit modification. Epigenetics is gradually revolutionizing our approach to cancer management. Treatment regimens are already incorporating HDACi and DNMTi and epigenetic biomarkers are gaining popularity. The examples mentioned in this review are believed to be just the tip of a huge body of knowledge still left to be discovered.

P.027

Rating the satisfaction and importance of the Hospital Blood Bank at Mater Dei Hospital by nursing officers.

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Introduction: Customer orientation has got increasing attention in healthcare for the past years. The customer perspective has been further emphasised by clinical laboratories as an important tool for the services they provide. A customer

satisfaction survey is one way to recognise areas and topics that benefit or require quality improvements.

Methods: A total of 70 Nursing Officers (NOs), working in various wards at Mater Dei Hospital, that make frequent use of the services of the blood bank were contacted in December 2012 to participate in this survey. In the end 52 (74.3%) participated. The survey was set online using the Survey Monkey engine (www.surveymonkey.com) with a paper based option. The first four questions asked the participant background information: grade, age group, gender and medical speciality. The questions on satisfaction and importance were set using a Likert scale (1: very dissatisfied; 5: very satisfied). A Not Applicable (NA) option was provided for all the questions. A time frame of one month was set and all potential participants were reminded by two emails sent on alternate weeks.

Results: On average the NOs showed a positive response to the services provided (very satisfied 27.5%; satisfied 60.4%). A total of 27.7% replied that the services by telephone could improve. On the importance of the services provided, on average, there was also a very positive response (very important 63.9%; very important 28.1%).

Conclusion: This survey showed that the services provided by the Hospital Blood Bank are satisfactory and that its role, as envisaged, is recognised by healthcare professionals.

P.028

The history of nursing

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Introduction: The nursing profession originated in the mid – nineteenth century, and has begun with Florence Nightingale. Nightingale believed that using scientific principles and informed education about medical conditions, could dramatically improve the care of sick patients. In 1854, Nightingale had the opportunity to test her beliefs during Britain's Crimean War. Nursing has seen profound changes since then. The unreliability of hospital based nursing care became particular problematic in the late 19th century. The convergence of hospitals' needs and women's desire for meaningful work led to a new health care professional: the trained nurse. The two World Wars also brought about significant changes to the nursing profession. For example, the military nurse emerged during World War 1. However, military nursing during the First World War was not without its challenges. Added to the hardships of caring for severely injured soldiers, nurses had to contend with the untrained Voluntary Aid Detachment (VAD) nurses who threatened to usurp the role of the professional nurse. Between the World Wars, Great Britain had no National Health Service. While nurses in the UK strove to acquire a Nursing Register, different hospitals employed different categories in an ad hoc fashion. The Second World War also brought new demands. For both patients and staff alike, this was a test of tolerance and ingenuity.

Conclusion: This paper thus seeks to explore the emergence of the nursing profession during the past century. Biographies and documentation in diaries of nurses who made an impact to the nursing profession will be explored.

P.029

Spontaneous gastric rupture in a neonate

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Introduction: Gastric perforation is a rare, yet serious problem in neonates associated with a high mortality rate. The exact aetiology is unknown but proposed mechanisms for its pathogenesis include traumatic, ischaemic and spontaneous causes. We describe a case of spontaneous rupture of the stomach in a neonate.

Conclusion: Acute abdominal distension in a neonate requires prompt assessment and investigation. A ruptured stomach is an unusual surgical emergency in neonates and urgent repair after diagnosis decreases the risk of mortality.

P.030

Methotrexate – the dark side of a vital drug in oncology

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Introduction: Methotrexate (MTX) encephalopathy is a recognised but relatively rare toxic effect of treatment with MTX. It may occur following both intrathecal and systemic administration of MTX. We describe two cases of MTX encephalopathy that occurred within a year in our local paediatric oncology unit.

Methods: We observed the signs and symptoms that two children developed a few days after receiving intrathecal MTX as part of the treatment for acute lymphoblastic leukaemia (ALL). These included motor problems, coordination difficulties, cranial nerve palsies, parasthesiae, aphasia and emotional lability. We describe the rapid evolution and changing nature of the signs and symptoms, as well as their complete resolution, both clinically and radiologically. Diffusion weighted imaging (DWI) magnetic resonance imaging (MRI) typically shows areas of restricted diffusion of water, which is thought to represent the reduction of motion of water along axons as a result of cytotoxic oedema.

Conclusion: MTX is an integral part of the treatment regimen for ALL. Although rare, our case report shows that one must consider the diagnosis of MTX encephalopathy if neurological signs and symptoms develop following MTX administration. Diagnosis may not be straightforward as symptoms are usually transient and tend to resolve spontaneously, while initial investigations are usually normal. The gold standard imaging modality is DWI MRI. The risks versus benefits of continuing treatment with MTX need to be considered.

P.031

The clinical course of a young female diagnosed with TINU syndrome

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Introduction: Tubulointerstitial nephritis with uveitis presents in healthy individuals, with minimal symptoms, yet unless well managed may progress to end-stage renal disease requiring dialysis or transplantation. This case describes the clinical course and management of a 21 year old female, previously healthy, who presented to casualty with generalised symptoms of painful red eyes, abdominal pain and frothy urine. Investigation findings included a creatinine of 666 mmol/L, an eGFR of <7 mls/min/1.73m² and a haemoglobin of 8.1 g/dL. An ultrasound was done, which showed symmetrically large kidneys with no signs of obstruction. A renal biopsy reported the presence of acute tubulo-interstitial nephritis with predominant eosinophilia. No definite cause for the nephritis was identified. Ophthalmic review diagnosed bilateral uveitis requiring NSAID (non-steroidal anti-inflammatory drug) eye drops. The combination of uveitis with tubulointerstitial nephritis suggests the diagnosis of TINU syndrome. She was started on intravenous methylprednisolone and then was switched to tailing down doses of oral prednisolone. Marked improvement of renal function and ocular manifestations was noted.

Conclusion: The underlying cause of TINU syndrome is still unknown. Frequently used medications such as NSAIDs and antibiotics, viral infections and autoimmune disease have been associated. The case outlines the importance of organising a renal biopsy when presented with deteriorating renal function from an unexplained cause with inconclusive imaging findings. Optimal and timely treatment with steroids can prevent long-term complications. Knowledge about TINU syndrome is key to early recognition and successful management of affected individuals.

P.032

A case of endometriosis in a Cesarean section scar

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Introduction: Endometriosis results from the deposition of endometrial tissue outside the uterus. The estimated prevalence ranges from 2-10% in the general population but may be up to 50% in infertile women. Subcutaneous endometriosis is however rare, and often remains overlooked in view of the patient presenting with a history of chronic lower abdominal pain. A 35 year old female, Gravida 4 Para 2, presented with a fourteen year history of chronic lower abdominal pain. The pain was cyclical and severe in nature, not resolving with analgesia. On clinical examination, a palpable, tender mass was noted above the pfannenstiell incision done for a Cesarean section in the year 2000. A pelvic MRI reported an endometriotic mass on the left side of the pfannenstiell scar. An exploration of the abdominal scar was done; a 6x3cm irregular hard tissue was excised from the subcutaneous region. Histology reported the specimens to be composed of connective tissue fibres and adipose tissue, with foci of endometriosis. Post-operatively, the patient reported an improvement in her symptoms and a fair reduction in the pain score associated with her menses. The patient was then prescribed the oral contraceptive pill for long-term management of residual endometriosis.

Conclusion: Clinicians should have a high index of suspicion of subcutaneous endometriosis in patients presenting with cyclical chronic abdominal pain, associated with previous abdominal surgery. It is curable, and surgery remains the mainstay of treatment in such a condition.

P.033

The middle ear: a pictorial review of CT and MR imaging anatomy and pathology

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Introduction: The aims of this pictorial review were the following: 1) To review in detail the radiological anatomy of the middle ear. 2) To illustrate the spectrum of soft tissue and bony lesions involving the middle ear and demonstrate the typical CT and MR findings in these patients

Methods: The relevant imaging of all the patients who were evaluated for any inner ear pathology in recent years was obtained from the local radiology information system, anonymised and reviewed.

Results: A spectrum of pathologies involving the medial ear was identified including inflammatory disorders, post-traumatic conditions, various benign and malignant tumours as well as congenital and vascular anomalies. A wide variety of conditions was reviewed including but not limited to malignant otitis externa, cholesteatoma complicated by chronic otomastoiditis and ossicular disruption following a longitudinal type temporal bone fracture.

Conclusion: There is a vast spectrum of lesions involving the middle ear. This pictorial review gives an in depth review of the radiological anatomy of the middle ear thus providing a road map which will enable accurate identification of the radiological abnormality and more precise treatment planning.

P.034

Inner ear imaging: a pictorial review

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Introduction: The aim of our pictorial review was to identify the various pathologies involving the inner ear, internal acoustic canal, cerebellopontine angle, and vestibulocochlear nerve whilst demonstrating the typical CT and MRI findings in

patients with such lesions.

Methods: The relevant imaging of all the patients who were evaluated for any inner ear pathology in recent years was obtained from the local radiology information system, anonymised and reviewed.

Results: A wide spectrum of inflammatory lesions, post-traumatic conditions, benign and malignant lesions, congenital and acquired abnormalities and much more can be identified thanks to today's sophisticated cross-sectional imaging. Particular focus is made on the commonest conditions such as labyrinthitis, temporal bone injuries, otosclerosis, vestibular schwannoma and vestibular aqueduct syndrome but rare and unusual conditions seen locally are also reviewed.

Conclusion: There is a vast spectrum of lesions involving the inner ear. Anatomy is the key to determining the aetiology of the lesion in question. This pictorial review gives an in depth review of the radiological anatomy of the inner ear thus providing a road map which will then enable accurate identification of the radiological abnormality and more precise treatment planning.

P.035

Pyrexia of unknown origin: never rest on your laurels

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Introduction: We present the case of a 67 year old gentleman known to suffer from Parkinsons disease, Lumbar disc prolapse, Pagets disease and Benign prostatic hypertrophy who presented with a history of weight loss, chills, pyrexia and dysphagia. The patient was investigated extensively and urinalysis demonstrated the presence of bacteria. ESR, CRP and Ferritin levels were all elevated. A diagnosis of urinary tract infection (UTI) was made and the patient was given a course of co-amoxiclav. The patient's pyrexia however persisted and a few weeks later was re-admitted with a right wrist drop. Investigations revealed a strongly positive c-ANCA (>2000) and antiproteinase 3 (>200). The patient also developed a left foot drop associated with a palpable petechial rash of his lower limbs. A skin biopsy taken from the rash showed a leukocytoclastic vasculitis. A sural nerve biopsy also showed florid vasculitis affecting blood vessels of all sizes. A diagnosis of c-ANCA-positive vasculitis was made. The patient was started on steroids and Cyclophosphamide. Treatment with Cyclophosphamide was continued monthly for a total of six months with significant clinical improvement.

Conclusion: We have presented an unusual cause of pyrexia of unknown origin, the aetiology of which was masked by a co existent UTI. This case highlights the need to monitor and follow up closely patients with PUO whose symptoms persist despite treatment of a potential cause of the pyrexia.

P.036

Gastrointestinal metastasis of infiltrating lobular carcinoma of the breast: three case reports and literature review

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Introduction: Metastasis of primary lobular breast carcinoma to gastrointestinal tract is a well-known yet rare occurrence with reported incidence ranging from 2% to 18%. Moreover, presentation of metastatic breast cancer with gastrointestinal symptoms is unusual.

Methods: A 67-year-old female presented with severe weight loss and loss of appetite. On further investigation the patient was diagnosed with infiltrative lobular breast carcinoma with gastric metastasis, presenting as linitis plastica. A 56-year-old female with the history of invasive lobular breast cancer 9 years prior, presented with a five-day history of constipation, colicky abdominal pain, nausea and vomiting. The patient was subsequently diagnosed with a metastatic

lobular breast carcinoma to distal ileum, causing small bowel obstruction. An 88-year-old female, with a history of metastatic carcinoma of the breast 11 years prior, later presented with persistent nausea and vomiting. The patient was diagnosed with small bowel obstruction secondary to metastatic invasive lobular carcinoma to duodeno-jejunal flexure.

Conclusion: When a patient with a history of breast cancer presents with gastrointestinal symptoms, a high index of suspicion for a potential breast cancer metastasis has to be maintained. Increased awareness of the possibility of breast cancer metastasis should be observed in females without history of breast cancer who are diagnosed with diffuse-type gastric cancer or gastrointestinal carcinoma of unknown origin. As it was the case in one of our patients, this may be the first presenting symptom of metastatic breast cancer.

P.037

A case of post-intervention acute opsoclonus myoclonus syndrome

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Introduction: Opsoclonus Myoclonus Syndrome (OMS) is a rare, neurological condition affecting 1 in 10,000,000 people annually. Opsoclonus, defined as involuntary rapid, multivectorial oscillations of the eyes, and myoclonus are usually present. OMS may be paraneoplastic but other aetiologies include viral or toxic agents. The pathogenesis is thought to be immune mediated. To our knowledge, this is the first reported case of OMS occurring acutely after an intervention under anaesthesia.

Methods: Case Presentation: A 37 year old woman with recurrent steroid responsive facial palsies and optic neuritis underwent elective Dilatation and Curettage (D&C) with Fentanyl and Propofol anaesthesia. Previous surgeries with anaesthesia were uncomplicated. Immediately after the procedure she became disoriented, with incoherent speech and inability to obey commands. Examination revealed rapid jerky multidirectional eye movements and myoclonic jerks. Breast examination with ultrasonography was normal. Investigations including onconeural antibodies, CSF analysis, and imaging were also normal. She was treated with intravenous Methylprednisolone with rapid improvement.

Conclusion: This case illustrates the occurrence of acute OMS after a minor surgical intervention. A possible predisposition may be auto-immune in view of previous multiple steroid responsive cranial mononeuropathies. There was no evidence of a paraneoplastic neurological syndrome. The acute occurrence of OMS after D&C is unexplained and may have been triggered by the intervention or the anaesthesia. OMS and its relationship with anaesthesia has not been studied in detail. Fentanyl and Propofol have been reported to be safe with established OMS while other anaesthetic agents such as ketamine and etomidate, aggravate the opsoclonus and myoclonus.

P.038

Colouterine fistula as a complication of diverticulitis: a case report and literature review

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Introduction: Colouterine fistula is a rare complication of diverticulitis.

Methods: An 81-year-old lady presented with colouterine fistula secondary to sigmoid diverticulitis. A 3-stage procedure was carried out. A transverse loop colostomy was first fashioned. After 8 weeks, hysterectomy, bilateral salpingo-oophorectomy and colonic resection was performed. After a further 7 weeks, reversal of the loop colostomy and end-to-end anastomosis was

performed.

Conclusion: A single stage en-bloc resection of the uterus and colon has been described as the procedure of choice for colouterine fistulae where malignancy cannot be excluded. In the presence of acute obstruction or severe local inflammation requiring urgent operation, resection and end colostomy followed by re-anastomosis at a later date has been described as the safest procedure. Our case demonstrates an alternative surgical plan for patients with signs of acute inflammation in whom malignancy cannot be excluded.

P.039

A case of McArdle's disease in an elderly gentleman: a multidisciplinary team approach

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Introduction: A 70 year old gentleman presented to Karen Grech Day Hospital with a one year history of progressively worsening weakness and wasting in both upper limbs that was impairing his activities of daily living (ADLs) including his daily duties and consequently his quality of life. Investigations showed an elevated creatinine kinase and erythrocyte sedimentation rate; spinal magnetic resonance imaging was normal. Electromyography showed short duration small amplitude waves. Muscle biopsy suggested a myopathy, possibly McArdle's disease, an autosomal recessive condition leading to a deficiency of myophosphorylase, resulting in an inability to utilize muscle glycogen stores. It is the commonest glycogenosis affecting skeletal muscle, with a prevalence of 1:100,000. It usually presents in childhood or adolescence; presentation in the elderly is highly atypical. The patient benefited from an interdisciplinary team approach to his management. He was assessed by the team physiotherapist and occupational therapist who follow him up regularly. A home visit was organised to improve the patient's functional ability in ADLs. Attention was given to falls prevention. He has a dedicated named nurse assigned to him who acts as his link to the interdisciplinary team and who co-ordinates his care. His general practitioner is also an essential team member and is kept informed on this patient's management.

Conclusion: From a patient's perspective, a diagnosis is of benefit only if it will contribute to a better quality of life. In neuromuscular conditions that affect ADLs, this can only be achieved through a co-ordinated interdisciplinary approach and a comprehensive care package.

P.040

Out-of-stock medicines in Malta – harnessing a white elephant

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Central Procurement & Supplies Unit, Ministry for Energy & Health

Introduction: Medicines within the governmental health services are procured by the Central Procurement and Supplies Unit (CPSU). The cheapest medicine which is technically compliant to the published specifications and which is certified to be safe, efficacious and of good quality is procured. In previous years the procurement system has been plagued by a longstanding out-of-stock (OOS) scenario. In fact, in 2012, the National Audit Office has designated the then system as unsustainable. Raw material shortages, medicine recalls, delivery problems, discontinued drugs, erratic consumptions and increase in demand are all ramifications to an OOS scenario. The local low demand of specific medicines may also discourage pharmaceutical companies from supplying such medicines. Notwithstanding these relatively constant variables, in 2015, the OOS situation has been reversed and effectively maintained as such by CPSU through the successful implementation of specific

policies. Mid-year reviews carried in 2013 and 2015 reveal that the average monthly number of OOS POYC medicines decreased from 56 to 5. Most importantly, horizontal and vertical integration of information has been spearheaded with a view to implement total quality management. Mitigation measures include better inventory management, customer demand modelling, adoption of time-based agreements and streamlining of procurement processes. Furthermore, a dedicated team has been established to tackle shortages in a timely manner without compromising the quality and efficacy of medicines.

Conclusion: Minimising the OOS situation is the cornerstone to effectively provide a constant armamentarium of medicines to stakeholders in order to implement cost-effective protocols based on both empirical evidence and patient expectations.

P.041

Anaesthetic management of a patient with fascioscapularhumeral muscular dystrophy undergoing a total abdominal hysterectomy

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Introduction: The anaesthetic management of patients with muscular dystrophy may present a challenge. These patients are sensitive to anaesthetic medications with respiratory depressant effects, may have an unpredictable response to medications such as suxamethonium and muscle relaxants. A 48-year-old female, diagnosed with fascioscapularhumeral (FSH) muscular dystrophy, underwent an elective total abdominal hysterectomy with bilateral salpingo-oophorectomy. A pre-operative multidisciplinary meeting was held. The patient was independent in her activities of daily living, denied recurrent chest infections and required very minimal medical support. It was decided to proceed with surgery under an inhalation agent-free general anaesthetic with propofol target controlled infusion (TCI) and avoiding the use of suxamethonium. In theatre, intravenous induction was performed using propofol TCI, fentanyl and atracurium. Intubation was relatively easy. Anaesthesia was maintained with propofol and no further doses of non-depolarising muscle relaxant were given intra-operatively. The surgery lasted one hour and forty five minutes. Intra-operative pain relief was provided with fentanyl, paracetamol, diclofenac and local bupivacaine infiltration. The non-depolarising muscle relaxant was allowed to wear off and post-operatively she was successfully extubated. In view of the increased sensitivity of these patients for the potential respiratory depressant effects of opioids required for pain relief, she was transferred to a high dependency unit. The patient was discharged to a surgical ward twenty four hours post-operatively with no reported complications.

Conclusion: The careful pre-operative assessment and knowledge of anaesthetic medications likely to cause an adverse response in this condition, is essential, to ensure a successful anaesthetic outcome.

P.042

Linchpin matters – procurement of medicines for the Maltese National Health Service

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Central Procurement & Supplies Unit, Ministry for Energy & Health

Introduction: Medicines procured within the governmental health services are distributed through the Pharmacy of Your Choice scheme to community pharmacies and the various public hospitals. Procurement is done by the Central Procurement and Supplies Unit (CPSU), which has

been established through the Public Procurement Regulations (SL174.04). Call for quotations (CfQ) for specifications of medicines, as agreed with the Directorate for Pharmaceutical Affairs, are published on the Electronic Public Procurement System (e-PPS) portal. Pharmaceutical companies, their representatives and wholesale dealers can bid for any CfQ following registration with e-PPS. Bidders need to upload details on three separate areas, i.e. administrative, technical and financial sections within a stipulated published timeframe; after which bidders personally lock the bid electronically. At this stage the bid cannot be modified. Designated CPSU staff can see the offers, including the prices, only after the CfQ is unlocked for evaluation. During the evaluation, the cheapest medicine which is technically compliant to the specifications, terms and conditions of the bid and certified to be safe, efficacious and of good quality is ultimately recommended for procurement. Evaluation includes an EU transnational comparison to ascertain that the unit price is fair and reasonable. Important considerations include delivery period, shelf-life on delivery and language of the product literature.

Conclusion: The procurement process is entirely electronic. It involves multi-point quality checks which are implemented to ascertain transparency, efficiency mapping, fairness and good judgement with a view to acquire the most cost-effective medicines to address the needs of a holistic patient-centric approach.

P.043

An atypical presentation of genital lichen sclerosis

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Introduction: A 40 year old gentleman who is a known case of myotonic dystrophy type 2 and hypogonadism presented to the Genitourinary Clinic with a 7 year history of hyperpigmented patches on the prepuce and the skin of the penile shaft. These patches were non-pruritic and had gradually become hypopigmented. Over the 7 months prior to presentation he had also developed a superficial ulcer on the glans. Examination showed no skin infiltration, tenderness or groin lymphadenopathy. Treponemal and herpes simplex infection were excluded. Punch biopsies from the glans penis and the hyperpigmented preputial skin were consistent with mild lichen sclerosis and lentigo simplex. The patient is under treatment with topical clobetasole propionate ointment.

Conclusion: Male genital lichen sclerosis (LS) is an inflammatory dermatosis characterised by foreskin tightening resulting in phimosis and white discoloration of the skin, often with a shiny porcelain appearance. We report this case for its atypical clinical presentation with skin hypopigmentation and surrounding brown to black pigmented patches, mimicking, in first instance, malignant melanoma. Atypical genital melanocytic naevi and isolated cases of melanoma have been reported to occur concomitantly in patients with LS. The immune response triggered by melanocytic lesions may be a causative factor for LS. Conversely the inflammatory microenvironmental present in LS may provide a niche that promotes melanocytic neoplasia. Since new areas of genital pigmentation can herald the presence of early melanoma, such pigmented areas are both a cause of concern for patients and also pose a diagnostic dilemma for physicians.

P.044

Candida albicans osteomyelitis in a five month old infant with mitochondrial depletion syndrome

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Introduction: Osteomyelitis in infants is usually caused by bacteria (most commonly *Staphylococcus aureus*) of haematogenous origin. We report an unusual case of *Candida albicans* osteomyelitis in a girl with a rare inborn error of metabolism.

Methods: A five month old female, diagnosed at three months of age with mitochondrial depletion syndrome, presented with pseudoparalysis of her right lower limb associated with swelling of the knee. MR (magnetic resonance) imaging revealed chronic osteomyelitis of the right femoral condyle involving the metaphysis and distal epiphysis, together with septic arthritis.

Results: *Candida albicans* was cultivated from a bone biopsy and synovial fluid aspirate following debridement of the infected area. She was subsequently treated with liposomal amphotericin B for six weeks with resulting improvement after which she was switched to a one year course of oral fluconazole. There was no growth from blood cultures and no evidence of renal fungal balls, retinitis or of vegetations on echocardiography. Immunological investigations did not show any immune defects. However, she had evidence of candidaemia a few weeks prior to presentation caused by an infected intravenous cannula.

Conclusion: Line-associated candidaemia is a serious infection that may present as chronic osteomyelitis in infants. Surgical debridement and prolonged antifungals are necessary to cure the infection and prevent relapse.

P.045

Cutaneous stigmata of spinal dysraphism

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Introduction: Congenital lumbosacral midline cutaneous stigmata including sacral dimples, birthmarks and localised hypertrichosis are known to be associated with underlying spina bifida occulta that includes split cord malformation, dermal sinus tract, tethered spinal cord, and intraspinal lipoma. The aim of this report is to highlight that such stigmata should be investigated early on with an ultrasound scan of the spine.

Methods: We report a case of a 5 year 11 month old girl who presented with recurrent urinary tract infections. On examination she had a palpable bladder which persisted even after voiding. Examination of the back revealed a large sacral haemangioma which had been noted at birth but was not investigated further. Neurological examination of her lower limbs was normal.

Results: A renal ultrasound revealed a dilated smooth-walled urinary bladder with a significant post-void residual suggesting poor bladder emptying. An MRI spine showed covered sacral dysraphism associated with lipomyelomeningocele and spinal cord tethering. There was also a right hydronephrosis and hydroureter and a markedly distended bladder with evidence of trabeculation. The patient commenced three- hourly clean intermittent catheterisation with overnight drainage. At operation the spinal cord was untethered successfully.

Conclusion: We present a 5 year 11 month old girl with bladder dysfunction secondary to spina bifida occulta and tethered cord and with a sacral haemangioma. We suggest that all new-borns with sacral stigmata should undergo a spinal ultrasound in the first few weeks of life to exclude underlying spinal abnormalities.

P.046

The co-parenting experience of stressed mothers and their husbands who have infants with a reactive temperament

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Introduction: This study explored the co-parenting experience of stressed mothers and their husbands who perceive their infants to have a reactive temperament. More studies exploring the co-parental relationship and the interactive dynamics between the parents and infants are needed (Rothbart, 2012).

Methods: The seven participants (recruited from the Well Baby Clinic) consisted of mothers who scored significantly high on the Parental Distress Index- 4 (Abidin, 2012) and who perceived their infants as high on Negative Affectivity (IBQ-R Very Short Form; Garstein & Rothbart, 2008). Conjoint in-depth semi-structured interviews were carried out and analysed through Interpretative Phenomenological Analysis.

Results: The main themes that emerged included feelings of joy and luck, considerable parental challenges, high exhaustion levels, lifestyle changes, giving utmost priority to infants and also difficulties in sustaining a close marital relationship. The family of origin played an important role in offering support to parents. An interactive relationship between the infants' temperament, the co-parenting dyad, the marital system, the family of origin and the influence of the Maltese socio-cultural context was highlighted.

Conclusion: This was the first local study which explored this topic. Through this study, health professionals gain a closer understanding of what these families go through and how much more holistic support would be beneficial. This study shed light on the importance of devising a more parent-friendly policy and expansion of services.

P.047

Primary bilateral non-Hodgkin's lymphoma of the adrenal gland presenting as incidental adrenal masses

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Introduction: Primary adrenal lymphoma is a rare condition and may present as unilateral or bilateral adrenal masses which may be rapidly growing. Patients do not usually have disease elsewhere. and this makes the diagnosis more difficult.

Methods: Case report: A 62-year old lady with a history of hereditary spherocytosis, was referred to hospital with progressively worsening symptomatic anaemia (Hb 7.7g/dl). She was found to have splenomegaly and CT of the neck and trunk showed bilateral, marked, homogenous adrenal gland enlargement and confirmed splenomegaly. Serum and 24 hour urinary catecholamines and metanephrines and urine cortisol levels were within normal limits. Axillary lymph node and adrenal biopsies were later performed and revealed diffuse large B-cell lymphoma (activated B-cell phenotype). Despite chemotherapy, disease progression was aggressive and the patient passed away 1-year after initial diagnosis.

Conclusion: Primary adrenal lymphoma is an aggressive type of diffuse large B-cell lymphoma and has to be considered in the differential diagnosis of endocrinologically silent adrenal

masses. Diagnosis is essentially histological and prognosis is usually poor.

P.048

Dermatitis herpetiformis in a patient with insulin-dependent diabetes mellitus - diagnosed with 16 years delay

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Introduction: A forty-two year old male with insulin-dependent diabetes mellitus since early childhood had a year-long history of recurrent pruritic vesicular-papular eruptions. Initial clinical and histological findings at the Dermatology of Dermatology suggested lichen simplex chronicus. In a 16 year course at the Department of Dermatology, the patient was treated with topical steroids. After 16 years the patient was consulted with fresh blisters and new biopsies were performed. The diagnosis dermatitis herpetiformis was finally made. A biopsy from the duodenum showed coeliac disease. Within two days the patient cleared on treatment with systemic dapsone.

Conclusion: This report reminds the practitioner of the association between dermatitis herpetiformis and other autoimmune diseases. When a patient with insulin-dependent diabetes mellitus presents with recurrent pruritic vesicular-papular eruptions, the clinician should consider the diagnosis dermatitis herpetiformis and coeliac disease. We stress the importance of performing a perilesional skin punch biopsy for immunofluorescence when acute skin blisters are present. In the poster we present a Table illustrating the association between autoimmune diseases and skin rashes.

P.049

Contrast-induced acute kidney injury - prevention and management

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Introduction: Contrast-induced acute kidney injury (CI-AKI) accounts for a significant number of cases of hospital-acquired kidney failure, with its consequent morbidity, mortality and high healthcare burden. There is substantial literature and a number of international guidelines on CI-AKI. Mater Dei Hospital still lacks a formal guideline on this subject.

Methods: The aim of this study is to present the latest literature review on CI-AKI, including the latest international guidelines and systematic reviews on various pharmacological and non-pharmacological therapies. This would be the rationale for a local guideline on prevention and management of CI-AKI.

Results: The local guideline would include definition of CI-AKI, pathophysiology, risk assessment and stratification, as well as prevention strategies for both outpatients and inpatients. Preventive measures include considering alternative imaging not requiring contrast medium (CM). The single most important protective measure is fluid volume loading. Nephrotoxic medications should be discontinued 48 hours prior to the study. CM volume and frequency of administration should be minimized while still maintaining satisfactory image quality. The use of iso-osmolar/low-osmolar CM in patients with GFR below 60 mL/min. N-acetylcysteine has been advocated to reduce the incidence of CI-AKI. However reported meta-analyses show disparate conclusions. Its use may be considered in high risk patients, but is not considered mandatory.

Conclusion: This evidence review combined with appraisal of present standard practice would aid the formulation of a necessary guideline, helping to standardise care and limiting the adverse effects of contrast administered in both radiological imaging and interventional procedures.

P.050

Crohn's disease and Takayasu's arteritis – same pathology?

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Introduction: Crohn's disease (CD) and Takayasu's arteritis (TA) are both granulomatous inflammatory conditions that can co-exist.

Conclusion: Both TA and CD share common features including granulomatous infiltration of the bowel and large vessel walls. Currently no consensus in the treatment of patients with dual pathologies exists. We believe that a detailed multicentre analysis should enable us to define the treatment strategy for such patients. The reported case is unique as it is the first reported with involvement of the upper gastrointestinal tract.

P.051

Does the 10-15% Caesarean section rate threshold established by the WHO in 1985 still apply to modern-day obstetrics in developed countries?

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Introduction: In 1985 the W.H.O. (World Health Organization) stated "there is no justification for Caesarean Section Rates (CSR) in any region to be higher than 10 – 15%". The economic imperative was cited as the driver for the rise in CSR in 69 developed countries which had CSR higher than 15%.

Methods: Recent publications from the W.H.O. did state that "it is impossible from the studies undertaken to correct for increasing maternal age, obesity and the occurrence of medical conditions during pregnancy". Adolescent birth rate significantly reduces the CSR. Average maternal age having a live birth has consistently increased and in 2014 reached 31years. 45% of the Maltese pregnant population have a B.M.I. (body mass index) of over kg/m². Gestational Diabetes rates have reached 16.4% and hypertensive disorders account for 6.7% of the pregnant population.

Results: From the data from the W.H.O. stillbirth rates (SBR) indicate a trimodal pattern correlating to CSR. 1. SBR of 2-4/1000 live births (LB), 2. SBR 4.1- 12/100 LB and 3. SBR 12.1 – over 30/1000, the highest being 46.7/1000 in Pakistan. None of the countries with a SBR of 2- 4 /1000 have a SBR between the W.H.O recommended 10-15% CSR.

Conclusion: Both caesarean section and induction of labour when indicated reduce the SBR especially in growth restricted babies which account for 50% of stillbirths. All relevant variables should be given due consideration when determining "ideal" Caesarean Section rates" especially in the context of the changing maternal demography and health characteristics in developed countries.

P.052

Diffuse large B cell lymphoma of the duodenum presenting with melena – a case report

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Introduction: Primary malignancy is rare in small bowel. Diagnosis is difficult in view of nonspecific signs and symptoms. Patients with small bowel lymphoma very rarely present with gastrointestinal bleeding. We present a case report of a patient who presented with a short history of dark stools and was diagnosed with duodenal NHL. A 58-year-old gentleman,

presented with a few days of melena. There were no B symptoms. There was no palpable abdominal mass or lymphadenopathy. Haemoglobin was 13.4g/dL. An oesophagogastroduodenoscopy (OGD) revealed a smooth friable mass at the junction between the second and third part of the duodenum. Biopsies showed diffuse large B-cell lymphoma. A staging PET-CT scan showed Stage 1AE disease according to the Ann Arbor classification, with isolated involvement of duodenum. Bone marrow aspirate and trephine biopsy showed no involvement by lymphoma. Four cycles of combination chemo-immunotherapy with R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisolone) were given. He was in PET-negative complete remission. After two years of follow-up, he remains disease-free with a normal repeat OGD.

Conclusion: This case report highlights the importance of considering lymphoma in the differential diagnosis of a patient presenting with unexplained gastrointestinal symptoms. This approach allows earlier diagnosis of disease and improves patient survival. In view of limited data and lack of recommendations on optimal treatment strategies for primary gastrointestinal NHL, this case report demonstrates the role of chemo-immunotherapy in early stage small bowel NHL, with excellent clinical outcome.

P.053

Vasospastic angina complicating Graves thyrotoxicosis – a case report

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Introduction: A 45 year old gentleman presented with a 2 month history of recurrent exertional and nocturnal chest discomfort. He also complained of occasional palpitations, increasing irritability, a fine tremor and heat intolerance. He suffered from dyslipidaemia and was a heavy smoker. Physical examination revealed a smooth diffuse goitre as well as bilateral thyroid bruits. He was clinically thyrotoxic. We requested a full blood count, renal, liver and lipid profiles, plasma glucose, cardiac enzymes, thyroid function tests (TFTs) and thyroid stimulating hormone (TSH) receptor antibody measurement. An electrocardiogram (ECG), a chest X-ray and an ultrasound of the thyroid were also organized.

Conclusion: This gentleman's cardiac presentation is likely to have occurred as a result of coronary artery vasospasm complicating his thyrotoxic state. Having been rendered euthyroid, he was referred for a total thyroidectomy.

P.054

Nocturnal seizures complicating endogenous hyperinsulinaemic hypoglycaemia – a case report.

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Introduction: A 53 year old lady, who suffered from an 8 month history of nocturnal seizures, was referred by the neurologists after being noted to have a random plasma glucose (RPG) of 2.42mmol/L (3.9-9.0mmol/L). She had been prescribed phenytoin for her seizures and denied other symptoms of hypoglycaemia. Examination was unremarkable. Blood investigations included a full blood count, renal and liver profiles, thyroid function tests, serum calcium, erythrocyte sedimentation rate, 9am cortisol, adrenocorticotrophic hormone, glycosylated haemoglobin (HBA1c) and a prolonged 72 hour fast. Computed tomography (CT) of the trunk, magnetic resonance imaging (MR) of the pancreas, an octreotide scan and a CT of the pancreas were also performed.

Conclusion: Approximately 90-95% of insulinomas are

benign and surgical resection is curative. However, recurrence has been reported in a small proportion of patients.

P.055

A case of intrahepatic portosystemic venous shunt with portal vein thrombosis

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Introduction: Congenital intrahepatic portosystemic venous shunts (CIPVS) are rare occurrences in patients who can be asymptomatic or present with neurological disturbances. They occur between a portal venous branch and a hepatic vein or the inferior vena cava. They are either spontaneous / congenital or the result of trauma. We present a case of a patient who was diagnosed with CIPVS as part of the work up for deranged liver function tests (LFTs).

Conclusion: Abdominal imaging is important in someone who presents with deranged LFTs and epigastric pain. Patients with incidental findings of CIPVS need long term follow up as repeated presentations of hepatic encephalopathy and a shunt ratio that exceeds 60% will necessitate treatment. Repeat imaging every few months should also be done to rule out potential complications like PVT similar to the unique case we present in this abstract.

P.056

Polyoma virus infection in a renal transplant patient: a first description in the Maltese population

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Introduction: BK-virus associated nephropathy is an increasingly recognised cause of graft failure. The pathogenesis remains unclear. We present the first patient in the Maltese Islands to be diagnosed and treated for this condition. A 51 year old gentleman with end-stage renal failure who received a cadaveric renal transplant in 2011, presented a year later with sudden rise in serum creatinine. He was admitted for investigation. An ultrasound doppler of the kidney was normal. Cyclosporin levels were within therapeutic range.

Conclusion: BK-virus associated nephropathy has important implications in renal transplant survival and quality of life. It is an important cause of graft failure which can be easily overlooked if not actively sought. The success of treatment intervention is increased with earlier diagnosis. It is recommended that all renal transplant recipients be screened for BK-Virus in the urine every three months during the first two years post-transplant or when allograft dysfunction is noted.

P.057

Spontaneous bacterial peritonitis in a systemic lupus erythematosus patient - a case report

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Introduction: Spontaneous bacterial peritonitis is a rare serious condition, carrying a mortality rate of 15%. It is most commonly seen as a complication of liver cirrhosis, although it has also been documented in transplant recipients. Its association with Systemic Lupus Erythematoses (SLE) has been reported however its incidence in this context is very rare.

Methods: A 42 year old lady, known to suffer from SLE

on Azathioprine, presented to Accident and Emergency complaining of sudden onset of severe generalised abdominal pain, a two day history of low grade fever, and a four day history of diarrhoea. She had a previous laparotomy for endometriosis and 2 previous myectomies. An abdominal ultrasound showed an ovarian cyst and she was referred for gynaecological review. On arrival to the gynaecology emergency room, her condition rapidly deteriorated and a diagnosis of septic shock was made and a decision for urgent laparotomy.

Results: At laparotomy, a small amount of frank pus was found in the abdominal cavity. Only a very small amount of free fluid was noted. Thorough examination of the small and large bowel did not reveal any visceral perforation. Examination of the pelvic organs was limited due to multiple dense adhesions, however no visceral damage was noted. Both blood cultures and abdominal pus swabs cultured *E. Coli*. The patient was treated on the Intensive Therapy Unit with gentamycin and teicoplanin.

Conclusion: She recovered well and was discharged home on the tenth postoperative day. Her azathioprine treatment was discontinued by the rheumatologist.

P.058

Pseudohyperkalaemia in essential thrombocythaemia

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Introduction: Pseudohyperkalaemia is defined as a serum potassium concentration 0.4mmol/l greater than the plasma concentration. Patients with elevated platelet counts can have pseudohyperkalaemia and this can be diagnosed by measuring concurrent plasma and serum potassium concentrations.

Methods: Case report: An 82 year-old lady was admitted to hospital with an 8-week history of progressive lower limb weakness. Past medical history was significant for atrial fibrillation and essential thrombocythaemia. Initial laboratory investigations revealed serum sodium 135mmol/l, potassium 5.06mmol/l, creatinine 58umol/l, WCC 3.90x10⁹/l, haemoglobin 11.5g/dl, platelet count 532 x10⁹/l. Despite normal renal function and no potassium supplementation, repeated hyperkalaemia up to 6.5mmol/l was noted. ECGs remained normal. Following an endocrinology team review, a plasma potassium level was requested (lithium heparin tube), recorded as 3.70mmol/l as opposed to a serum level of 5.25mmol/l. Repeat plasma potassium levels were also normal. The patient was diagnosed with pseudohyperkalaemia secondary to primary thrombocythaemia.

Results: Pseudohyperkalaemia can be defined as a serum potassium concentration 0.4 mmol/l greater than plasma concentration. In thrombocytosis this is due to the degranulation of platelets when clotting in vitro, releasing potassium into the serum and giving falsely elevated serum potassium levels. Once diagnosed it requires no further treatment.

Conclusion: Spurious hyperkalaemia due to essential thrombocythaemia is well-documented but poorly recognised among clinicians. When serum potassium levels are not concordant with the clinical picture, a high-index of suspicion is needed and the appropriate plasma potassium samples should be submitted to the laboratory to provide the true potassium levels and avoid iatrogenic hypokalaemia.

P.059

A hair follicle in vivo hypoxic stress model: a promising approach in basic science research

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Introduction: Gene expression profiling is an important tool to understand molecular mechanisms in normal physiology and responses to toxicological or pharmacological exposure. The proposed in vivo human model is an original innovative approach in basic science research providing a unique window of opportunity for the researcher to study gene expression of a mini organ that is safe and effective. We report for the first time a single human subject experiment designed to look at the gene expression profile of in vivo hair follicles subjected to 10 minutes of ischemia.

Methods: A blood pressure cuff applied to the left arm at a pressure of 200mmHg and maintained for 10 minutes was used to achieve hair follicle hypoxia. Thirty hair follicles were plucked from the same forearm at 30 minutes post-ischemia. Extracted total RNA [RF1] was quality checked using Agilent Bioanalyser®. cDNA was generated and RNA sequencing was performed using Next Generation Sequencing technology. The data generated was analysed using the Ingenuity® Pathway Analysis® software.

Results: The RNA sequencing dataset included expression information on 16,286 genes. At 30 minutes post-ischemia the ribosomal protein genes were up regulated, with the topmost regulated pathways being eIF2, eIF4 and mTOR signalling. This supports an immediate ribosomal stress response 30 minutes after the 10 minute challenge.

Conclusion: The Hair follicle model provides a versatile method to study gene expression at different time points following a challenge. Using this model can provide insights in the use of pre-conditioning to protect cellular damage during surgery.

P.060

Corporate social responsibility: the future of medical research?

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Introduction: Corporate social responsibility (CSR) is generally understood as actions that further social good, beyond the direct interests of the entity and thus has a positive impact on the community. Various similar initiatives are now also been taken in our University through the Research Innovation and Development Trust. This paper will analyse some of the initiatives taken at the Malta Medical School.

Methods: In the Medical School, CSR initiatives have been taken by various Departments. Clinical Pharmacology and Therapeutics works with the Caritas Malta Epilepsy Association; Pathology works with the Dementia Society and Physiology and Biochemistry works with the Coeliac Association. These activities usually involve awareness raising, organisation of conferences and fund raising for research. On a Faculty level, the Presidency-Faculty Working Group (PFWG) has been set up to encourage CSR among Faculty Members and students.

Results: Some activities of PFWG include encouraging Faculty members and students to apply as volunteers and undertake pro bono work with the Malta Community Chest Fund and assist in fund raising initiatives. PFWG also aims to facilitate discussions with relevant stakeholders with respect

to medical issues, in order to bring different sectors around the table in order to come up with solutions to current problems and to lobby for change, where necessary.

Conclusion: CSR is now not only considered a good exercise of democracy but also one of good best practice which will bring added value to the activities of an entity. Moreover it will enhance the academic's direct contribution to society, culture and the economy at large.

P.061

The case for extending visiting hours at Mater Dei Hospital

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Introduction: The current visiting hours at the main General Hospital – Mater Dei Hospital, in the Maltese Islands are 2¾ hours. In most European and North American hospitals visiting hours are significantly higher, ranging from 5 hours to unlimited visiting times.

Methods: Extended visiting hours encourage greater participation of the family members and friends in the care of patients. Scientific evidence indicates that liberal or unlimited visitation policies lead to improved patient safety and better outcomes (lower heart rates and lower blood pressure). Family members may assist in mobilization and nutrition of patients. While in hospital the informal carers may acquire obtain “in-hospital” training as how to continue care at home. This assistance may result in reduction in length of stay and attenuate the risk of long-term institutional care both factors diminishing the pressure on the beset hospital bed-state.

Results: There may be resistance towards the implementation of extending visiting hours at Mater Dei Hospital. There lies an embedded restrictive mentality of nursing and medical personnel towards visitors. With extension of visiting hours patients' privacy may be disturbed. These factors may lead to non-engagement of hospital staff in this initiative. Education of hospital personnel is required to circumvent these possible obstacles.

Conclusion: Extending visiting hours at Mater Dei Hospital will further encourage engagement of patient family members in the hospital care of their loved ones. This will benefit all the stakeholders in particular the patients themselves.

P.062

Addressing Mater Dei Hospital's bed occupancy challenge: the role of improved influenza vaccine uptake

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Introduction: Influenza vaccination of high risk population groups has been reported to reduce hospitalization by 32% to 45%. The World Health Organization (WHO) and European Union (E.U.) have recommended that, by 2010 and 2014 respectively, 75% of high risk groups should be immunized against influenza every year.

Methods: Vaccination of the elderly population in Malta is currently 40%. Only 70,000 individuals are vaccinated in the Maltese Islands giving a overall population vaccination rate of approximately 16%. In addition, this shortfall in vaccination uptake has in the past resulted in a perennial wastage of more than 8,000 vaccinations per year.

Results: In order to address these lacunae, an influenza vaccination initiative was spearheaded by Mater Dei Hospital's Patient Safety and Quality Improvement Team (PaSQIT), focusing on high risk patients attending the hospital environs for outpatient or other appointments. The vaccination station was sited in a strategic position close to the Outpatients'

Department so as to increase vaccination uptake. The total number of vaccinations given through this initiative exceeded 8,900.

Conclusion: This year 2015 through the synergism between PaSQIT and the Infection Control Department it is envisaged that this initiative is further entrenched in the services of Mater Dei Hospital.

P.063

Improving bed-occupancy in the Department of Obstetrics and Gynaecology

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Introduction: Obstetrics suffers from fluctuations in workload to the extent that on occasion there may be sudden severe surges in workload straining both the human resources and plant facilities including the departmental bed-state.

Methods: During the migration from St. Luke's Hospital to Mater Dei Hospital the Department of Obstetrics and Gynaecology lost 25% of its bed-state (125 to 94 beds). Bed occupancy averaged 98% leaving little or no reserve to the extent that patients with gynaecological conditions were frequently transferred to Medical and Surgical Wards. In November 2011 following a bed-state crisis which impacted on quality of care two documents were drawn up in an effort to address the bed-state management. It was evident that the bed-state reserve had to be augmented. Two documents were drawn up addressing the length of stay following vaginal deliveries and Caesarean Section. Bed-state vigilance was continually maintained and improved with the employment of a data clerk.

Results: Over a period of one year following November 2011 the bed occupancy improved from 98% to 78%. This allowed sufficient reserve to absorb most surges in the departmental bed-state. A recent development was the twice daily hospital bed-state management report which assists “bed controllers” in planning any contingencies that may need to be applied.

Conclusion: Possibly some measures to improve bed management undertaken in the Department of Obstetrics and Gynaecology may be implemented to assist in the general hospital bed-state.

P.064

E-learning in medical education

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Introduction: E-learning (also referred to as web-based learning or online learning) involves the use of Internet technologies in order to offer users control over the sequence and pace of learning. There are two common e-learning modes: distance-learning and computer-assisted instruction. Technologies such as message boards and teleconferencing enables users to discuss clinical cases by means of images and videos, hence broadening one's views and increasing the level of collaborative learning and team-work. E-learning is considerably more convenient since it allows learners to access materials according to their individual schedule and hence the learning experience is rendered more personalised. This is likely to translate into increased retention of information and enhanced utilisation of resources. Learners are likely to become more actively involved since they have more control over their learning experiences. Educators will help to facilitate the learning process and assess the outcomes, hence contributing towards making the experience more learner-centred. This has shown to increase the level of satisfaction from both learners and educators. E-learning enables doctors working in their home country to follow post-graduate courses organised by foreign universities without the need to travel. This is therefore very cost-effective since it eliminates travel costs and reduces expenses related to institutional infrastructure.

Conclusion: The integration of e-learning into medical

education will undoubtedly enhance the learning experience by means of increased networking and active student involvement.

P.065

Accessory liver lobe in an omphalocele: case report

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Introduction: The predicted prevalence of omphalocele is 2 in 10,000 births. Neonates with omphalocele present with a high frequency of associated anomalies including chromosomal abnormalities and structural anomalies. Accessory lobe of the liver is a rare congenital anomaly with only a few cases reported in conjunction with omphalocele.

Conclusion: We report a case of an accessory lobe of the liver on a stalk herniating through an omphalocele diagnosed at birth and review the medical literature.

P.066

The role of taster weeks for foundation programme trainees

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Introduction: Career decision making may be a challenging task for Foundation Programme (FP) doctors. Taster weeks could be a way in helping out trainees in making the right career decision. The aim of this study was that to determine the impact of taster weeks on FP trainees in their career decision making.

Methods: This was a prospective study that was carried out between January 2010 and December 2013. Doctors who attended a taster week had the opportunity to fill in a questionnaire regarding the taster week.

Results: 63 doctors completed the questionnaire after having had a taster week in 15 different specialties. In 71.4% of cases, the taster week further confirmed their interest in applying for that particular specialty in which they had done the taster week. 14.3% of doctors decided that after having spent a week in the specialty, they would not be applying for a post in that specialty. The rest (14.3%) commented that the taster week has given them more speciality options to which to apply for.

Conclusion: This data demonstrates that taster weeks are beneficial to the FP trainees and should be actively encouraged by the careers team. Meanwhile, the FP guidance regarding taster weeks should always be actively followed as to provide a high-quality experience to our doctors.

P.067

Abdominal pain and diarrhoea in a nulliparous female

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Introduction: A 34 year-old female was referred with a 1-year history of recurrent generalised abdominal discomfort and loose stools. History and physical examination were unremarkable. Routine blood and stool investigations were also normal except for elevated inflammatory markers. A colonoscopy was performed. This revealed patchy erythematous mucosa with overlying aphthous ulceration in the proximal sigmoid colon, beyond which an unpassable stricture was present. These findings prompted a working diagnosis of Crohn's disease. However mucosal biopsies were suggestive of ischaemic colitis secondary to small vessel vasculitis. A CT colonography demonstrated a sigmoid colon indentation with narrowing, possibly due to intra-mural thickening. A diagnostic laparoscopy revealed severe endometriosis with significant narrowing of the sigmoid and ascending colon with pre-stenotic

dilatation. A right hemicolectomy and sigmoid colectomy were performed. Histology was consistent with endometriosis involving the submucosa and muscularis propria.

Conclusion: The prevalence of intestinal endometriosis is estimated to vary between 3.8% and 37%. Symptoms can mimic a wide variety of intestinal pathologies, and there are no non-invasive investigations that can reliably diagnose the condition. The incidence of intestinal resection for patients undergoing surgical treatment for endometriosis is about 0.7%. Our case demonstrates that gastrointestinal involvement by endometriosis should always be entertained in the differential diagnosis of chronic abdominal pain in young nulliparous females.

P.068

Could cholecysto-duodenal fistula presents simultaneously in two countries? Bouveret's Syndrome, the surgical management and review of literature

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Introduction: Cholecysto-duodenal fistula (Bouveret's syndrome) is a rare complication of gallbladder disease and it accounts for 1-4% of all mechanical obstruction caused by gallstones. Bouveret's syndrome tends to occur more commonly in women (65%) with a median age of 74.1 years at presentation. Since the first publication of two cases by Bouveret in 1896, only 300 cases have been published in the literature up till 2008. Early diagnosis in patients with Bouveret's syndrome is important as the mortality rate in such patients is reported to be between 12% to 33%.

Methods: Two case reports and literature review.

Results: In this review we present two cases treated in two different countries, during the month of June 2014. A 55-year-old man and 88-year-old woman were treated in Malta and United Kingdom respectively. Two different surgical approaches were used. Laparoscopic gastrotomy was performed for the 55 year-old gentleman and removal of a 10cm stone was successfully removed. A laparotomy with gastrotomy was performed for the 88year-old gentleman with the stone being successfully removed with this surgical technique. Both patients were discharged with no postoperative complications.

Conclusion: A literature review did not show any standardized emergency surgical management for Bouveret's syndrome. Therefore the emergency surgical approach should be individualised. Endoscopic treatment for stone extraction is usually unsuccessful. These two cases show that the use of gastrotomy (laparoscopic or laparotomy) for stone extraction is a safe surgical technique. Other surgical options include enterolithotomy with or without cholecystectomy. The repair of the cholecysto-duodenal fistula is still controversial.

P.069

Pneumoperitoneum post ERCP due to a pre-existing liver abscess

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Introduction: The incidence of post endoscopic retrograde cholangiopancreatography (ERCP) complications is around 5% to 10%. The ERCP – related perforation incidence rate is 0.14% to 1.6%, commonly related to ERCP sphincterotomies, results in a high mortality of 4.2% to 29.6%. We present a unique case of post ERCP pneumoperitoneum due to pre-existing liver abscess prior to the ERCP procedure.

Methods: One case report and literature review.

Results: A 39-year-old gentleman presented to our Surgical Department with epigastric pain and an elevated amylase. A Computer tomograph (CT) showed calculi in the distal common

bile duct causing obstruction and a liver abscess in liver segment 2/3. CT guided drainage of the cyst revealed thick fluid. An ERCP was performed and no stones were present in the CBD and sphincterotomies were performed. The patient unfortunately required a laparotomy due to pneumoperitoneum following the procedure. At laparotomy the CBD and duodenum was noted to be intact however the previous liver collection was noted to be leaking pus. The abscess cavity was drained and following the laparotomy the patient made an uneventful recovery.

Conclusion: The literature search showed that a similar case occurred following ERCP in a patient with liver metastasis. The potential mechanism of this is the increased pressure in the biliary ducts during the ERCP led to rupture of the liver abscess. This may illustrate the need to avoid excessive air insufflation to prevent such a potential rare complication with ERCP in patients with liver abscess and/or following percutaneous drainage of liver abscesses.

P.070

Self-tamponading complete common carotid artery transection with home-made rifle injury: a unique case

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Mater Dei Hospital

Introduction: With an increasing incidence in penetrating neck trauma, the acute surgical management of such cases is an evolving and important area of trauma care. The outcome of neck trauma with vascular injury is determined by a rapid and interdisciplinary approach. Such patients normally present with shock and rapid management is required. Up to this submission, a literature search failed to show an accurate incidence rate of such trauma or management guidelines.

Conclusion: These injuries remain challenging due to the large number of vital structures lying in the confined neck area. It is the authors' intention to describe this unusual mechanism of neck penetration and to stress the vital importance of the treatment paradigm that foreign objects should not be removed/manipulated until the patient arrived in the operating room.

P.071

Severe Thrombotic Phenomena in JAK-2 Positive Chronic myelomonocytic leukaemia

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¹Haematology, ²Malta Foundation Programme, ³Acute medicine, ⁴Vascular surgery, ⁵Pathology

Introduction: Several studies have shown that thrombotic complications may be the initial presentation of myeloproliferative neoplasms. JAK2-V617F mutation may be the only feature suggesting an underlying MPN on presentation with thrombosis. In this report, we present two patients with extensive intra-abdominal thromboses who were later diagnosed with chronic myelomonocytic leukaemia (CMML). Both patients were positive for the JAK2-V617F mutation. The incidence of JAK2-V617F mutation is detected in 95% of Polycythaemia Vera patients, 50-60% of essential thrombocytosis and primary myelofibrosis but only in ~ 7.8% of CMML patients.

Conclusion: The combination of CMML with high circulating tissue factor carrying monocytes and JAK-2 positivity could constitute a special subgroup with a greatly enhanced risk of thrombosis.

P.072

E-portfolio compliance over six years of the Malta Foundation Programme 2010-2015

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Malta Foundation School

Introduction: Standard Foundation Programme (FP) recommendations include minimum requirements for recording of training opportunities as well as supervisor meetings amongst others. This study looks for compliance on e-portfolio with these standards.

Methods: E-portfolio web-based queries were done for the most common uses of eportfolio for FP years 2010 through to 2015 and these were compared to minimum standards.

Results: Multi-source feedback (MSF) gave the most consistent result with each trainee receiving an average of 28.7 responses. The minimum number of Supervised Learning Events (SLE) was reached in all years with averages per trainee above the minimum mandatory numbers: Case Based Discussion (CBD) 6.6, mini clinical evaluation exercise (MINI-CEX) 6.7, directly observed procedural skills (DOPS) 9.2, Developing the Clinical Teacher (DCT) 1.1. By far the most popular SLE was DOPS. Averages in the last year were the best of the past four years. Minimum meetings with supervisors were just below the required with a positive trend. Best results for all meetings were recorded in the final year of the study 2014-15. Averages were slightly pushed down because the number of trainees on e-portfolio was slightly in excess each year as some trainees start and finish out of phase, need extended training, or stop training.

Conclusion: Compliance with the FP recommendations was reached across the board in the SLEs and the MSFs. Meetings with Supervisors is just below the accepted minimum with a positive trend. The Foundation School processes seem to be achieving the desired results.

Disclosure: The Malta Foundation School is funded through the Malta Post-graduate Medical Centre by the Department of Health.

P.073

C1 esterase inhibitor deficiency: a rare cause for coronary artery thrombosis

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Introduction: C1 esterase inhibitor (C1-INH) is a serine protease inhibitor that acts on a number of proteins that play a role in the complement, coagulation and kinin-kallikrein cascades. By adhering to specific factors (C1, Factor XIIa, MASP-1, MASP-2, Kallikrein), it helps maintain a balance between thrombin generation and fibrinolysis. Deficient patients however exhibit an elevated thrombotic risk in response to unregulated complement activation and fibrin formation. The benefits of C1-INH as a therapeutic modality also indirectly demonstrates its physiological role. By partly modulating neutrophil dependant mechanisms, treatment with C1-INH has been shown to reduce the extent of myocardial ischaemia and reperfusion injury in animal and human models. C1-INH deficient patients are thus at a higher cardiovascular risk than the rest of the population for acute coronary thrombosis. We here describe a case of acute myocardial infarction secondary to acute coronary thrombosis as a result of C1-INH deficiency. With otherwise no evidence of coronary artery disease on angiography, a right coronary artery filling defect was consistent with acute thrombosis rather than rupture of an atherosclerotic plaque. As no other explanation was present for this event, C1-INH deficiency (giving rise to higher levels of the aforementioned factors) is thought to be the reason for this presentation, making this case report the first of its kind in the literature.

P.074

Superficial siderosis following posterior fossa exploration

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Mater Dei Hospital

Introduction: Superficial siderosis is a very rare neurodegenerative disorder characterised by deposition of haemosiderin in several areas of the nervous system. Early identification of this condition will obviate the need for further, extensive investigation of a patient's symptoms. We present the case of a 70 year old lady who presented with deafness and falls. A neurological examination revealed bilateral upper motor neuron and cerebellar signs, as well as right sided sensorineural deafness. Magnetic resonance imaging of the brain revealed linear hypointensities in the brainstem and cerebellum. Features on magnetic resonance imaging were pathognomonic of superficial siderosis. Further questioning elicited a history of posterior fossa exploration half a century prior to her current presentation. No other causative lesions for the superficial siderosis were identified on imaging.

Conclusion: Various sources of recurrent bleeding have been implicated in the literature as a basis for haemosiderin deposition. These include dural defects, neoplasms and arteriovenous malformations. Our patient gave a history of posterior fossa exploration, suggesting the presence of a dural defect as the cause of this disorder.

Disclosure:

None

P.075

A case of etanercept-induced lupus nephritis

Anthea Brincat, Jonathan Gauci, Karen Cassar, Joseph Farrugia Agius, Paul John Cassar

Introduction: Tumour necrosis factor (TNF) inhibitors are used successfully in the treatment of psoriatic arthritis and plaque psoriasis. However they have also been associated with the paradoxical development of other autoimmune diseases. We report the case of a gentleman who developed acute nephritis following treatment with etanercept.

Conclusion: Clinicians need to have a high index of suspicion for autoimmune diseases, including lupus nephritis, in patients undergoing therapy with anti-TNF agents.

P.076

The origins of medical Maltese as a curriculum topic: a descriptive study

Isabel Stabile, Sarah Catania

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Introduction: The number of International medical students especially from the UK has increased. These students are at a disadvantage because hospital patients may have limited English.

Methods: This descriptive study examines the critical steps taken in the evolution of Medical Maltese as a curriculum topic.

Results: A crash course of Medical Maltese for international medical students was piloted by the Faculty in 2007-08. This evolved in 2009 as a course taught only to Medical Foundation students, all of whom are Arabic speakers. In 2012, the MMSA Medical Education Officer planned Medical Maltese tutorials taught by local students for English-speaking students. This further evolved into a Degree Plus subject taught by MMSA in collaboration with the Department of Maltese. Feedback from the course was excellent, with the majority of students agreeing that course expectations were met. In 2015, Medical Maltese has become a fully fledged entrance requirement for the medical course.

Conclusion: Since 2012, english-speaking international students have been given the opportunity to become conversant with basic medical vocabulary and scientific terminology to

enhance Maltese communication skills in realistic situations in a medical setting. The important role of MMSA in this achievement cannot be underestimated.

P.077

The effect of alcohol on the body's physiology: the good and the bad

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Introduction: The consumption of alcohol in food and drink is widespread throughout different populations and cultures. The link between alcohol and the effect on health has been studied extensively. The aim of this literature review was to shed light on the underlying biochemical and physiological mechanisms involved in bringing about such effects in various body systems.

Conclusion: Alcohol has long been associated with liver damage, the major underlying mechanisms being the production of Reactive oxygen species (ROS) and the abortion of biochemical pathways involved in their removal. The effect of alcohol on the mucociliary apparatus of the airways varies according to the amount and the period of alcohol exposure. While chronic alcohol consumption can, in fact, predispose to chest infections by decreasing the beating frequency of cilia, a small and acute dose of alcohol can actually bring the reverse effect, that is, an increased ciliary beating frequency. This is thought to occur via a nitric oxide and protein kinase – dependant biochemical pathway. Alcohol acts as a double-edged sword where cardiovascular health is concerned. Evidence shows that light-to-moderate alcohol consumption is actually associated with better health than no consumption. A variety of biochemical processes are involved - resulting in increased HDL cholesterol production, increased insulin sensitivity as well as other mechanisms involving nitric oxide. Beyond a certain threshold however the cardiovascular benefits associated with alcohol consumption are over-ridden by associated adverse effects.

P.078

Incidence and prevalence of Huntington's disease in Malta: a methodological discussion

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Introduction: Huntington's disease (HD) is an autosomal dominant neurodegenerative condition with an average prevalence of between 4 and 8 per 100,000. Limited research in Malta indicates a higher prevalence. However, no formal epidemiological study has ever been done.

Methods: The primary limitation at present is the lack of an adequate patient database. Various methodologies to determine incidence and prevalence are discussed. Different approaches include: making HD a notifiable condition, the snowball sampling technique and the cross-sectional approach. Prospective molecular genetic analysis of cord blood for the CAG repeat size in the Huntingtin gene may be used to give an estimate of the incidence of HD in Malta. The size of the CAG repeats in the Huntingtin gene may be studied and the mean size compared to that in other European countries in order to identify whether Malta has a higher norm for CAG repeats. This could be combined with haplotyping techniques which could confirm the presence of a founder effect.

Conclusion: Estimation of the frequency of HD in Malta will require the use of multiple epidemiological and molecular genetic techniques. The advantages and limitations of each, together with a synergistic combination of techniques, will be presented in the light of various ethical and humanistic problems that will arise and which have to be overcome for such a study to be successful.

Epidemiological knowledge of HD would direct public health efforts in supporting and highlighting the plight of HD sufferers.

P.079

A case of atypical Kawasaki disease with giant coronary aneurysms containing thrombus

Stephen Micallef Eynaud

Mater Dei Hospital

Introduction: Kawasaki disease (KD) is an acute febrile, systemic vasculitic syndrome of unknown etiology, occurring primarily in children younger than 5 years of age. Administration of IVIG within the first 10 days after onset of fever in combination with high dose aspirin reduces the risk of coronary artery damage in KD. Though rare, giant aneurysms of the coronary arteries may develop in untreated cases and prove extremely challenging to manage.

Methods: A 9-month-old Caucasian boy presented to our paediatric emergency department with a 4-week history of intermittent pyrexia and irritability. Typical mucocutaneous signs of Kawasaki Disease were absent upon presentation. A trans-thoracic echocardiogram identified a giant aneurysm of the left anterior descending artery with thrombus formation in-situ and the child was managed with intravenous immunoglobulin, steroids, high dose aspirin therapy and later warfarinisation.

Results: Keywords: Kawasaki, Arteritis, Coronary, Giant Aneurysm, Thrombus were used in our PubMed review of the literature, generating 70 relevant case reports.

Conclusion: Cardiovascular sequelae of Kawasaki disease include giant coronary artery aneurysms with thrombosis. Enlargement of a coronary aneurysm after the acute phase of Kawasaki disease is an extremely rare phenomenon and the outcome of interventional approaches poorly studied.

P.080

Impalement by a hutton sabre – a rare cause of penetrating chest injury during a historical re-enactment

Stephen Micallef Eynaud

Mater Dei Hospital

Introduction: The course of a sharp blade through the chest wall and thoracic viscera is one of the most ancient causes of death, with accounts from primary sources dating back to well over 3,000 BC. The sabre is a curved thrusting sword that served the heavy cavalry of long-diminished empires – an extremely unlikely weapon of choice in the 21st Century. Injuries inflicted by such weapons during historical re-enactments offer us a glimpse of the surgical morbidity encountered during these times.

Methods: We present the case of an eighteen-year-old Maltese gentleman brought to our acute hospital with a penetrating chest injury sustained during a recreated battle scene with a fellow actor. An initial chest radiograph confirmed surgical emphysema and a right sided pneumothorax. Computerised tomography outlined the track made by the sabre as it slid through our patient's right hemithorax and vertebral column, narrowly missing his spinal cord.

Results: Keywords entered into PubMed Search: Penetrating Chest Injuries; Sword; Re-Enactment; Sabre; Spinal Cord generated 58 cases relevant to our case report.

Conclusion: Weapons that took years of practice to master before stepping onto the battlefield can deliver fatal consequences when handled by a novice. It is the authors' wish to bring this rare incident of chest trauma to the attention of the medical community with the suggestion that harmless properties (props) replace such dangerous items in historical re-enactments.

P.081

The role of surgery in the management of native valve endocarditis – a literature review

Stephen Micallef Eynaud

Mater Dei Hospital

Introduction : Infective endocarditis (IE) carries a mortality rate that approaches 30% at one year. Surgery was first performed in 1961 for fungal vegetations growing from a diseased tricuspid valve and in 1965 an aortic valve replacement was completed in a patient infected with *Serratia marcescens*. Valvular operations have become more common, and surgery is required in up to half of acute infections and a significant proportion of those in convalescence. Guidelines provide clear indications for when surgical intervention is indicated. Frequent indications for surgery are congestive cardiac failure (60%), vegetation size (48%), refractory sepsis (40%) and embolic complications (18%).

In this review of the literature, we outline the evidence that supports the indications for surgery in the setting of native valve endocarditis. We also attempt to provide recommendations in areas where confusion persists.

Methods: Keywords: Native-Valve; Endocarditis; Surgery were entered in a PubMed-generated search.

Results: 308 studies relevant to our review of the literature were generated.

Conclusion: There is an established role for surgery in IE across a wide range of patients, with early operative intervention already outlining clear benefits in the management of this complex condition. With further international research collaborations becoming established each year, the future may hold more concrete evidence to guide management strategies. However, decision making in individual patients will remain difficult, and the need for full communication between the cardiologist, microbiologist, and cardiac surgeon as part of a multidisciplinary team cannot be over-emphasised.

P.082

An assessment of the quality improvements achieved by foundation doctors' audits

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Introduction: Clinical audit plays an important part in the drive to improve quality of patient care. The audit cycle involves observing practice, setting standards, implementing change and observing new practice, thus improving patient care.

Methods: A total of 82 audits were registered on the Foundation Programme Audit Register from January 2013 to May 2015. An online questionnaire was devised to assess the stage of the audit cycle reached by each audit, including changes implemented so far and future plans for the audit. This questionnaire was sent by email to the authors of each registered audit.

Results: The questionnaire was completed for 40 audits (48.7%). The two main reasons for motivation to participate in an audit were to influence practice (75%) and to improve Curriculum Vitae (60%). 82.5% of audit results were presented, mainly at the foundation programme audit day (57.5%), compared with 20% of audit results which were not presented. No audits reached the final stage of completing the audit cycle. The main reasons for this included: time limitations (54.2%), moving to different departments (54.2%) and administrative difficulties (25%). 75.8% of authors do not intend to handover audit for someone else to complete in the future.

Conclusion: Most departments undertake clinical audits but failure to close the loop undermines their effectiveness and wastes resources. The authors suggest implementation of an 'Audit Handover' system, to ensure important results of clinical

audit do not go to waste, and lead to improvements in patient care.

P.083

Congenital renal and ipsilateral vas agenesis presenting with infertility; a case report

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Introduction: A case of unilateral agenesis of the kidney associated with an absent ipsilateral vas deferens in a 35 year-old male presenting to the Male Urology Infertility Clinic with a history of subfertility is reported. The clinical picture of proximal obstruction was determined through examination and ultrasound imaging, which revealed otherwise normal parameters, including testes of normal size bilaterally and unremarkable serological results. Total sperm count was also normal, being over 20 million spermatozoa/mL on two occasions. No cystic fibrosis-related mutations or polymorphisms were detected in this patient.

Conclusion: Unilateral absence of the vas is considered uncommon, occurring in 0.5 to 1% of men. Association between unilateral absence of the vas and renal agenesis has been reported sporadically. Disruption of the embryological development of the mesonephric duct, which gives rise to these structures, is postulated as a possible cause. Bilateral absence of the vas deferens is more commonplace and is often due to cystic fibrosis. This suggests that congenital bilateral absence of the vas deferens (CBAVD) and congenital unilateral absence of the vas deferens (CUAVD), particularly in association with renal abnormality, may arise from different pathologies, with necessarily different prognostic implications and therapeutic possibilities.

P.084

Killing me softly - imaging features of a retroperitoneal myxoliposarcoma

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Mater Dei Hospital

Introduction: Myxoid Liposarcoma is the second most common adult soft tissue sarcoma after well-differentiated liposarcomas. As illustrated by the case report presented, diagnosis can be difficult.

Methods: A 56 year old gentleman presented with abdominal distention over a few months. He was otherwise well and routine blood tests were normal. Examination of the abdomen revealed a firm swelling. CT was performed for further evaluation. A large cystic, non enhancing mass was observed on CT on the right side of the abdomen. This was closely related to the right psoas muscle with secondary compression of the right ureter and resultant right-sided hydronephrosis. Subsequent MR imaging demonstrated a 19.5 cm x 17 cm x 21 cm high T2 signal intensity lesion in the right retroperitoneum. On T1 fat saturated sequences it appeared hypointense with thin internal nonenhancing septations. Right-sided hydronephrosis was observed together with compression of the distal common bile duct causing mild biliary dilatation. Differential diagnosis included hydatid cyst. The mass was removed surgically. It was gelatinous in nature and histology reported myxoid liposarcoma.

Conclusion: Myxoid liposarcoma is rare but has a high recurrence rate after surgery. It may be difficult to establish the diagnosis with MRI due to the lack of fat signal intensity and without administration of contrast the tumor may mimic cystic pathology, such as a hydatid cyst. Gadolinium-enhanced MRI is therefore an essential tool in diagnosis and should be the standard imaging modality in the investigation of all retroperitoneal masses which are likely to be sarcomas.

P.085

A case report indicating the effectiveness of TCC- EZ total contact casting

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Introduction: Total contact casting is considered to be the gold standard treatment of diabetic neuropathic ulcers but its application is difficult and requires special conditions. TCC-EZ is a newly developed system of total contact casting with easy application. We report the result of use of TCC-EZ for the first time in Malta.

Methods: TCC-EZ cast was applied to the left foot of a patient with a deep penetrating neuropathic plantar foot ulcer which had been present for over 18 months. The cast was applied according to the manufacturers' guidelines. It was changed after 3 days to ensure that no skin damage was caused at pressure points by use of the cast. Subsequently the cast was changed weekly.

Results: The ulcer has decreased drastically in size following 7 applications of the TCC- EZ. The ulcer surface area has decreased from 6.25 cm² to 0.5 cm². The ulcer was more than 1 cm deep at the start of application and at last change the granulation tissue in the residual area is flush with the skin.

Conclusion: Our initial experience with use of TCC-EZ is encouraging. Application is easy and does not require special conditions thus reducing costs. The device is acceptable to the patient. Use of the TCC-EZ has resulted in almost complete resolution of a chronic neuropathic ulcer in a short time. Availability of TCC-EZ is likely to result in improved healing of neuropathic ulcers with implications for limb salvage in this cohort.

Disclosure: The Total contact cast has been provided by Derma Sciences through Cherubino Ltd. Malta.

P.086

Measure of functional improvement after intrathecal baclofen therapy

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Mater Dei Hospital

Introduction: Intrathecal Baclofen Therapy (IBT) indicated in the management of severe spasticity has been introduced recently in Malta. An implantable infusion system delivers precise amounts of Baclofen injection directly to the intrathecal space via a surgically implanted infusion pump and catheter. This study was carried out on a 53 year old Maltese female with severe spastic parapareses who was not responding to oral spasmolytics in maximum doses and has been on continuous intrathecal Baclofen since December 2014. The aim of this study was to assess functional improvement after administration of continuous IBT.

Methods: The main outcome measures used in this study included a Patient Functional Assessment Questionnaire (PFAQ) and Patient Global Impression of Change (PGIC). The patient was interviewed and scores given for function before and after IBT.

Results: The patient reported a distinct improvement after pump implantation that has lessened activity restrictions, decreased symptoms especially spasms and enhanced her overall quality of life consistent with a decreased total PFAQ score.

Conclusion: The overall improvement observed in this patient has confirmed that IBT was an appropriate treatment for her severe spasticity not responding to oral medication. Careful patient selection is however crucial to the success of IBT. Objective documentation of functional assessment before and after IBT on all patients receiving this therapy could furthermore be analysed in a clinical audit of this new service in Mater Dei Hospital.

P.087

Trainees' perception of workload and quality of training in the Malta Foundation Programme

Kevin Cassar, Tonio Piscopo

Malta Foundation Programme, Mater Dei Hospital

Introduction: The Malta Foundation Programme was set up in 2009 and is affiliated to the United Kingdom foundation programme. It is a two year programme which recruits fresh medical graduates and provides broad based training. This study reports on trainees' perception of workload and quality of training in the programme.

Methods: All foundation trainees receive quarterly electronic end of post questionnaires (EOPQs) asking a series of questions regarding their experience during their assignments. These are strictly anonymous to ensure honest responses. The responses regarding the fourth quarter for each year between 2011 and 2015 were analysed.

Results: The number of trainees in the programme has increased steadily between 2011 and 2015 (2011: 105; 2012: 137; 2013: 154; 2014: 175; 2015: 192). The proportion of trainees claiming to work beyond rostered hours has decreased from 61.8% (2011) to 52.3% (2015). There has been a significant reduction in those feeling short of sleep (69.7% (2011) 58.4% (2015)). There is a very high degree of satisfaction with clinical skills acquired throughout but this has steadily increased (2011: 90%; 2012: 92.7%; 2013: 93.4%; 2014: 93.4%; 2015: 95.4%). Trainee satisfaction with clinical supervisor teaching has also been high and has increased steadily (2011: 86.5%; 2012: 89%; 2013: 91.5%; 2014: 87.6%; 2015: 94.6%)

Conclusion: Less trainees work beyond rostered hours and feel short of sleep as trainee numbers have increased. The vast majority of trainees are satisfied with clinical skills acquired and clinical supervisor teaching. The expansion in numbers has not affected trainees' satisfaction levels.

P.088

An unusual cause of painful heavy period in a 30 year old woman

Helga Consiglio, Camen Portelli

Introduction: A 30 year old nulliparous woman presented twice to the Gynaecology emergency room with a 2 month history of abdominal pain, tenesmus, weight loss and one month of continuous vaginal bleeding.

Methods: The patient presented initially to the GP but then to the Gynaecologist with abdominal pain, constipation and tenesmus coupled with bleeding for a month. The initial examination suggested a 12 week sized fibroid uterus. However, within 2 weeks this became a 20 week sized pelvic mass with an abnormally hardens cervix. CT scan confirmed that apart from the utero cervical mass there were bone, liver and lung metastases.

Results: Histological examination of the uterine Curettings obtained at Examination under anaesthesia revealed tumour of Neuroendocrine origin.

Conclusion: This unusual aggressive tumour was not amenable to surgery and caused severe abdominal pain require opiate analgesia. The patient underwent radiotherapy with impressive shrinkage of the mass. She was followed by 3 cycles of chemotherapy with further improvement. In conclusion, common symptoms such as heavy bleeding and pain even in a young patient may be caused by serious rare conditions and must not be underestimated.

P.089

A pictorial review of the different colonic findings at CT colonography

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Department of Medical Imaging

Introduction:

CT Colonography has become the radiological investigation of choice to assess the large bowel in patients with suspected colonic pathology. It has replaced barium enema with a reported sensitivity of up to 93% for polyps >10mm and 71% for polyps between 6mm and 9mm compared to 70% and 41% for polyps of similar sizes on a barium enema. This examination involves obtaining supine and prone CT acquisitions of the abdomen and pelvis following colonic insufflation with gas. This data is then processed by advanced computer software to obtain a 3D reconstruction of the colonic lumen. The aim of this presentation is to demonstrate the 2D and 3D radiological appearance of different colonic pathologies identified on CT colonography performed in our department and correlate them with their histological data.

Methods: We reviewed the CT colonographies performed over a one year period and identified different cases which demonstrate the spectrum of pathological conditions in the large bowel. Correlation with the corresponding histological data was performed where possible.

Results: The different pathological conditions identified include diverticular disease and chronic diverticulitis, sessile and pedunculated colonic polyps, colonic carcinomas and lipomas. We demonstrate the 2D and 3D radiological appearance of these different colonic pathologies and correlate them with their histological data.

Conclusion: CT colonography is capable of demonstrating a wide variety of colonic pathologies. It is the radiological investigation of choice to investigate the large bowel.

P.090

The teaching, training and assessment of medical leadership and professionalism at undergraduate level - a systematic review

David Cassar

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Introduction: The development of the medical doctor is today undergoing marked transformation. It is increasingly identified, and now also required by many regulatory bodies, that doctors need to be not only knowledgeable, skilled, with the right attitudes and holistic, but also seeking to provide best patient experience and best health gain. This is required within the context of a rapidly changing, complex, and challenging healthcare environment, and an increasingly expectant patient and society. Within this setting the development of medical leadership comes to the forefront, where it provides a key and solid base for the doctor in personal development, professionalism, teamwork, quality of care, patient safety, and service development. The development of the doctor starts at undergraduate level.

Methods: The author will undertake a systematic review of the teaching, training and assessing of medical leadership and professionalism in undergraduate medical schools, aiming at a thorough understanding of the awareness of the discipline, its content, methods of delivery and their strengths and limitations. The evidence base will be investigated through an exploration of the literature through Medline, Cochrane Library, Embase, CINAHL and regulatory and teaching bodies.

Results: Results will be described and discussed.

Conclusion: The implications for the Medical School of the University of Malta will be discussed.

P.091

The Malta postgraduate training programme in psychiatry: from competence to excellence

Claire Axiak

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Introduction: Following completion of the Foundation Programme medical doctors wishing to take up a career in psychiatry find themselves at a crossroads. Do they continue to specialise in their chosen field of speciality or do they fulfil the promise they've made to themselves countless times, to finally take a break from their studies and start enjoying the working-life of a doctor? The basic educational product of foundation training is to create a competent medical doctor with the capacity to provide general care in a speciality. Yet beyond general competence, capability should also be built to allow tomorrow's psychiatrists to adapt to significant developments in the field and to take on board new evolving scientific knowledge and clinical skills so as to excel in their speciality and ensure that they provide consistent, ethical and up-to-date care to their patients.

Conclusion: The Postgraduate Training Programme in Psychiatry, approved by the SAC, is now in its sixth year of operation having had several intakes of trainees. The author, a trained assessor at the Malta Foundation School and a Programme graduate, shall outline the Programme which is divided into two parts: Part 1-BST & Part 2-HST, each of which has a theoretical component and a competence-training component. Its philosophy is grounded in the biopsychosocial model whereby the contribution and interplay of biological, psychological and social factors is acknowledged to play a significant role in the context of mental illness. The 5-year programme is highly structured and administered by Consultant Dr John Mifsud and his specialist committee.

P.092

A case report of co-existent infective and libman sacks endocarditis

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Mater Dei Hospital

Introduction: Non-bacterial thrombotic endocarditis (NBTE) and infective endocarditis (IE) are two distinct clinical and pathological entities which are often very difficult to distinguish. We present a case of IE in a chronically damaged mitral valve (MV) in a 38 year old with systemic lupus erythematosus (SLE). The patient initially presented with dyspnoea and acute lower limb ischaemia, managed with a femoral endarterectomy. An echocardiogram revealed extensive vegetative material on both mitral valve leaflets, with independently mobile components on the atrial side of the posterior leaflet. Leaflet thickening was also present, extending down to the basal two-thirds of the subvalvular apparatus, not involving the papillary muscles. Severe mitral stenosis and regurgitation in the context of IE and persistent circulatory collapse prompted an urgent multidisciplinary decision in favour for emergency MV replacement. The valve was surgically exposed via a Dubost trans-atrial approach, with intra-operative findings suggestive of a chronically inflamed SLE related marantic valve (libman sacks endocarditis [LSE]). Biopsies of the MV were sent to the lab for histology, later confirming the presence of LSE. Positive blood and mitral valve cultures for *Enterococcus faecalis* however suggested that a marantic valve had become acutely infected, possibly giving rise to the acute clinical deterioration. Despite the same pathophysiology in both IE and LSE, sterile vegetations in LSE rarely become subsequently infected, making this case report extremely rare in the clinical field.

P.093

Differential diagnosis of pulmonary nodules in a patient with seropositive rheumatoid arthritis

Maria Bonnici, Michela Frendo, Simon Mifsud, Emma Louise Schembri, Bernard Coleiro

Mater Dei Hospital

Introduction: We report a case of a 54 year old lady with seropositive rheumatoid arthritis (RA) on methotrexate presenting with a two day history of fever and a disseminated pustular rash. The patient's son had Varicella Zoster Virus (VZV) infection 3 weeks prior to her admission. A chest radiograph revealed an incidental lesion in the left upper lobe. This was further evaluated by a computed tomography (CT) scan which demonstrated four well-defined lesions with a surrounding halo sign. She had elevated markers of inflammation. The differential diagnosis of the lesions in this clinical context included rheumatoid nodules, staphylococcal pneumonia, varicella pneumonia as well as neoplastic metastatic lesions. The patient was treated with co-amoxiclav and clarithromycin for seven days during which the fever settled and the level of the inflammatory markers improved. A few days later, virology results for VZV revealed positive IgM and IgG implying an acute VZV infection. Acyclovir was not commenced at this stage since the patient had improved. The pustular rash, CT findings, family history and positive VZV IgM pointed towards a diagnosis of VZV pneumonia.

Conclusion: This case identifies the importance to include VZV pneumonia in the differential diagnosis of pulmonary nodules in an immunocompromised patient so that treatment with acyclovir is initiated in the earlier stages before virology results are out so as to avoid the potential devastating complications of VZV infection.

P.094

A case of purely cutaneous Rosai-Dorfman disease

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Introduction: A 53 year old previously healthy lady presented with a 10 month history of two indurated and firm, mildly hyperpigmented, slow-growing nodules on the posterior aspect of her left thigh and calf that appeared following fish bites while swimming. The clinical differentials included dermatofibrosarcoma protuberans or an atypical mycobacterial infection. Punch biopsies from both sites were histologically similar and showed aggregates of large histiocytes, a peripheral dense lymphoid infiltrate and numerous plasma cells. Emperipolesis, the phagocytosis of leukocytes, was also observed. Immunohistochemistry showed expression of CD68 and of S100 protein with lack of CD1a expression. Hence the microscopic appearance excluded the clinical differentials and was consistent with cutaneous Rosai-Dorfman disease (RDD). Due to the absence of any systemic features on examination and investigation, a diagnosis of purely cutaneous RDD was thus made. The patient was prescribed topical clobetasol propionate ointment with significant regression of the lesions on follow-up.

Conclusion: RDD is an uncommon reactive non-malignant histiocytosis presenting with painless bulky lymphadenopathy, constitutional symptoms, and extra-nodal involvement, most commonly in the skin. Cutaneous lesions are clinically nonspecific with variable colour and morphology, but histologically exhibit a characteristic dermal infiltrate of histiocytes and inflammatory cells with prominent emperipolesis. Rarely the skin can be affected even without any accompanying nodal or systemic involvement, as in this case. Such cases typically remain localised and follow a benign course. The polymorphic clinical appearance of RDD in the skin makes

the diagnosis of purely cutaneous RDD quite challenging but nevertheless possible thanks to its distinctive microscopic features.

Disclosure: None.

P.095

Aortic stenting for neonatal coarctation of the aorta

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Introduction: Coarctation of the aorta (CoA) comprises 5-8% of congenital heart disease. This condition has variable severity. We report a 9 day old female baby who presented acutely in the neonatal period with profound acidosis, heart failure, severe metabolic acidosis and disseminated intravascular coagulation. She was ventilated and echocardiography revealed CoA with a hypoplastic arch as well as partial anomalous pulmonary venous drainage and a small ventricular septal defect.

Conclusion: A bare metal coronary artery stent was implanted across the CoA site via a right femoral artery cut-down. Acidosis rapidly reversed and the child was extubated. She was electively transferred to London six days later. The stent was removed and corrective surgery was carried out, with excision of the coarctation site and augmentation of the aorta.

P.096

Multiple anticonvulsant regimes used to control a male term neonate diagnosed with Ohtahara Syndrome: a case report

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Introduction: Ohtahara syndrome or Early Infantile Epileptic Encephalopathy, is a rare, progressive, encephalopathy starting early in life. We report a male infant with a prolonged stay at the neonatal unit as management of his seizures was difficult. This neonate is the first child born to Libyan parents with no history of seizures or consanguinity. He was delivered vaginally at term weighing 3.24kg and with Apgar scores of 6 and 9 at 1 and 5 minutes respectively. He sustained cyanotic spells within 13 hours of age after which he was admitted to the NPICU. He developed generalized seizures which continued for days, the time between successive attacks varying between 30 minutes and 2 hours. Symptoms included stiffness, arching of the back, facial twitching, jerking of the upper and lower limbs, and rolling of the eyes. CNS infections, electrolyte abnormalities and inborn error of metabolism were ruled out. MRI Brain was normal; however an EEG showed abnormalities, with relatively attenuated background activity and frequent bursts of non-specific, high amplitude short activity, followed by burst suppression, consistent with moderately severe encephalopathy and the probable diagnoses were Early Infantile Epilepsy and other metabolic encephalopathies. Various multiple anticonvulsant drug regimens were used until his condition stabilized.

Conclusion: Infants with Ohtahara syndrome usually have a much shortened life expectancy. Psychomotor impairment is frequent in survivors.

P.097

Bronchopulmonary sequestration

Simon Paul Micallef, Victor Grech, Patrick Sammut, Joe DeGiovanni

Introduction: A 3 year old boy (AG) was referred by the general practitioner to the paediatric outpatients in June, 2014 for recurrent chest infections and coughing while engaging in physical activity.

Methods: At the outpatients' visit AG had a chest x-ray done which showed widened right hilum and blunted right costodiaphragmatic sinus.

An elective CT scan of the thorax showed a right lung which was smaller than the left with the right basal lung parenchyma receiving a significant arterial supply via an anomalous arterial vessel originating directly from the abdominal aorta at the level of the celiac axis. The affected right lower lobe was draining into the pulmonary veins. Normal right pulmonary fissures could not be identified and the right lower lobe appeared inseparable from the surrounding normal pulmonary parenchyma with a discernible reduction in the number of bronchi to the involved lung. This implied intralobar pulmonary sequestration.

Results: A cardiac catheter showed normal pulmonary arteries and normal pulmonary venous drainage. An anomalous vessel measuring 9mm in diameter arising close to the coeliac axis was located.

Conclusion: This was embolised uneventfully with a 10 by 8 Amplatzer ADO device. Fistulae and anomalous vessels may be large and may require large devices for closure, even up to and including devices that would normally be utilised for the closure of atrial septal defects.

P.098

Appendiceal mucocoele - differential diagnosis for adnexal mass

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Introduction: Mucocoele of the appendix occurs due to abnormal mucus accumulation and distension of the appendiceal lumen, resulting from benign or malignant processes. This rare condition is found in 0.2 to 0.8% of appendiceal pathologies. Mucocoeles may be diagnosed incidentally or can present with symptoms including abdominal pain or a palpable right iliac fossa mass.

Methods: We report a case of a 70 year old lady who presented with post menopausal bleeding. As part of sonographic investigations a 9cm by 4.5cm adnexal cyst was seen and otherwise normal. The patient did not complain of any abdominal pain and was otherwise asymptomatic. She was admitted for an elective laparoscopic ovarian cystectomy. During the procedure the mass was noted to be coming from the appendix rather than the right adnexa. A laparotomy was carried out. The unruptured cyst was removed along with the distal base of the appendix. Further histopathology assessment confirmed the mass to be a low grade adenoma and mucocoele.

Conclusion: Due to their close proximity to the right adnexa, cases of appendiceal mucocoeles in females may lead to a misdiagnosis of ovarian pathology. Therefore it should be considered as a rare differential diagnosis for right adnexal mass. Surgical follow up is required post-op due to a potential concomitant colonic malignancy.

Disclosure: None.

P.099

High levels of vitamin d deficiency and insufficiency in a population attending an IVF clinic

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Introduction: Vitamin D has been shown to improve the quality of oocytes, quality of sperm and improve implantation rates. The aim of this study was to assess the baseline Vitamin D levels in a population of men and women attending ART clinic.

Methods: 248 men and women attending the Mater Dei Hospital unit had their Vitamin D levels assessed at their first visit. An immunoassay test measuring the total 25(OH) Vitamin

D in serum was used. The groups were equally divided between men and women.

Results: The population studied showed that 12.9% had a deficient Vitamin D level, and 58.5% had an insufficient Vitamin D level. Only 28.6% of the population had normal levels of vitamin D. Of the last group only 8.45% of the individuals with a normal vitamin D level (>30ng/ml to 100ng/ml) had a Vitamin D level equal to or greater than 45ng/ml. Of the total population studied only 2.42% had a Vitamin D level equal to or greater than 45ng/ml.

Conclusion: It is our recommendation that the necessary steps are taken at Vitamin D replacement so as to bring the levels back within the normal reference range. Recommended substitution levels are too low. It is our practice that 4000IU of Vitamin D per day are used to replace Vitamin D insufficient states. 8000IU of Vitamin D daily is need in deficiency states. The effect on overall pregnancy rates, improvement of gamete and embryo quality, as well as implantation rates will be the subject of further studies.

P.100

Is foetal haemoglobin re-induced by disorders or drugs?

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Introduction: Foetal haemoglobin (HbF) levels were analysed with the intention of identifying all elevated or persistently high HbF (HPFH) and associating these selected cases therapeutic drugs and disorders diagnosed. The aim of this study was to see whether there is any association between elevated foetal haemoglobin (HbF) levels and therapeutic drugs.

Methods: For this study a total of 2500 samples were collected. Hb F and Hb A₂ were determined by high pressure liquid chromatography (HPLC), and Isoelectric Focussing (IEF) used for the detection of any variant haemoglobin. On a number of selected cases (Hb F levels >2.5%) DNA extraction was carried out. The *KLF1* gene was sequenced while the common single nucleotide XmnI was detected by direct enzyme digestion.

Results: It was noted that 18 patients (0.72%) had an increase in HbF levels (>2.5). A number of drugs such as (Vincristine, Cyclophosphamide and Etoposide) were being administered to these respective patients. The data was retrieved from respective medical records after obtaining ethical approval. No mutations were found in the *KLF1* gene.

Conclusion: On correlating the drugs administered *in vivo* and specific disorders with Hb, it was found that HPFH could be caused directly by HbF inducing drugs mentioned. Mutations in genes that are associated with HbF induction were absent in all cases. The γ - to β -globin switch mechanism remains elusive, however further prospective studies involving HPFH patients could help in better understanding of the switch.

Disclosure: This project was part financed by Bio-Rad Laboratories, 4000 Alfred Nobel Drive - Hercules, CA 94547 USA

P.101

Patient experience of primary health care in Malta: a quantitative study

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Introduction: Primary care-based health systems provide clinically and cost effective care. Patient experience is an

important factor in needs assessment and reform. The aim of the study was to assess patient experience of the Maltese primary health care (PHC) and compare the public with the private sector.

Methods: 240 participants were randomly and equally selected from each of the 3 primary care department catchment areas. Participants were allocated into two groups: public and private primary care providers. Data was collected via telephone interviews using the Primary Care Assessment Tool (PCAT). PCAT computes a score for each of its 11 domains of health care and 2 total scores: the primary care score (PCS) extended score (PCES).

Results: Overall response rate was 80%: 55.42% were females, mean age was 57.7 years. Extent of affiliation was the highest scoring domain (mean 3.63, maximum=4) followed by access to first contact (3.31) and ongoing care (3.11). Community orientation (mean 2.19) and comprehensiveness of supplied services (2.26) scores lowest overall. Both PCS (72.34%) and PCES (69.4%) registered similar results with no statistically significant intergroup regional differences. However, overall, PCS registered a slight statistical difference ($p=0.045$) with the public having the higher (23.15 vs 22.99) mean score. No overall statistical difference is registered for the overall PCES.

Conclusion: This study shows that, while intersectorial difference was only slight, both public and private sectors need to address different shortcomings. Coordinated intersectorial reforms are required to ensure effective care and gatekeeping to other specialist and hospital management.

P.102

Amoebic keratitis: a case report

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Introduction: We report a case of a 56 year old moderate myope with contact lens related Acanthamoeba keratitis. He presented to eye casualty with a 3 week history of painful red eye, as this did not resolve with antibiotic drops prescribed by his general practitioner. On examination he had a central ulcer overlying a small ring infiltrate and evidence of radial keratoneuritis. A provisional diagnosis of contact lens related Acanthamoeba keratitis was made and thus was started on dual therapy Polyhexamethylene Biguanide and Chlorhexidine drops after a corneal scrape was performed. Acanthamoeba was confirmed on culture after six weeks. After six months of continued anti-acanthamoeba therapy, a topical steroid in the form of dexamethasone was added to the regimen in order to control his inflammation. In the meantime, he also started exhibiting signs of rubeosis iridis and he was injected with intracameral bevacizumab on a six weekly basis. To control his excruciating pain, he required repeated mechanical superficial keratectomy and bandage contact lens fitting.

Conclusion: After 9 months of treatment, his cornea healed with a significant central scar. A penetrating keratoplasty was performed to remove the bulk of infected tissue and restore a clear cornea. Following this procedure, his vision improved to 6/36 from just hand motion detection. He has a significant cataract which will need doing once the transplant settles.

P.103

A rare case of spider poisoning in Malta

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Introduction: Spider poisoning is uncommon in Malta where only two endemic species, *Loxosceles rufescens* (the Mediterranean recluse spider) and *Steatoda paykulliana* are believed to have venom that may be harmful to humans. The recluse spider is more harmful as it can cause both cutaneous

and systemic manifestations referred to as cutaneous and systemic loxoscelism. Loxoscelism may lead to complications including skin necrosis, acute renal failure, haemolysis, pulmonary oedema and rarely death. We report the second known case of spider poisoning in Malta caused by the Mediterranean recluse spider. A 30-year-old lady presented with localised erythema and pain on her left thigh after a witnessed spider bite. Over a few days the area developed features of dermonecrosis suggestive of necrotic arachnidism together with systemic symptoms including a high grade fever, fatigue and a generalised erythematous eruption. The patient was managed by a multidisciplinary team and systemic symptoms resolved over a 6 day period while the skin lesion healed with scarring within 2 months.

Conclusion: Although spider bites in Malta are not common, it is important that they are diagnosed and managed appropriately as they could lead to potentially serious sequelae.

P.104

Not a failing Fontan!

Justine Bugeja, Victor Grech, Joseph DeGiovanni

Introduction: Our male patient presented in infancy with Uhl's anomaly (absent right ventricular myocardium). He initially had a bidirectional Glenn (superior vena cava to pulmonary arteries) which was followed by a non-fenestrated total cavo-pulmonary connection (TCPC) at 6 years of age. This was complicated by recurrent laryngeal nerve damage resulting in right hemidiaphragmatic paralysis. He developed protein-losing enteropathy (PLE) with diarrhoea, lower limb oedema, weight gain, low serum albumin and elevated stool alpha-1-antitrypsin. Plication of the flail diaphragm was carried out, resolving PLE. He re-presented with PLE two years later. Enteral budesonide ameliorated the symptoms but this had to be stopped due to steroid toxicity.

Conclusion: Cardiac catheterisation showed stenosis of the inferior vena cava, which was stented. Furthermore, the right pulmonary artery was decompressed into the atria with the use of a stent, using a modified trans-septal puncture technique. Symptoms have vanished and biochemical markers have normalised, in effect curing PLE.

P.105

Right ventricular clots and pulmonary hypertension in a neonate

Justine Bugeja, Victor Grech, Raymond

Parascandalo, Alexander Gatt, Joseph DeGiovanni

Introduction: Right ventricular (RV) clots are rare and may result in pulmonary embolism or pulmonary hypertension. We present a female patient who presented at 28 days of age with severe respiratory distress. She had been born by elective caesarean section for breech presentation (BW 4.32kg). An initial echocardiogram showed evidence of pulmonary hypertension only. She was started on oral sildenafil. Investigations showed signs of sepsis. A second echocardiogram three days later showed three large RV thrombi which were definitely not present on the previous scan which was reviewed. Intravenous heparin was started, followed by low molecular weight heparin.

Conclusion: Serial studies demonstrated brisk and complete dissolution of the thrombi with gradual improvement in pulmonary hypertension and clinical parameters. A thrombophilia screen was negative, despite a suggestive family history. It is suspected that this rare presentation may have been precipitated by neonatal sepsis.

P.106

Management of Grave's disease in pregnancy - a case report

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Introduction: Grave's Disease is characterized by the production of TSH-receptor stimulating antibodies. This case

report aims to discuss some of the management considerations that have to take place in pregnancy.

Methods: A 38 year old was admitted at 21 weeks pregnancy with signs, symptoms and biochemical evidence of thyrotoxicosis. The patient had been diagnosed with Grave's disease a year previously. Propylthiouracil (PTU) was increased cautiously during her pregnancy to a dose of 150mg three times daily. Despite maximum medical treatment, maternal control remained suboptimal. Foetal ultrasounds showed the development of a foetal goitre. At 26 weeks the fetus was persistently tachycardic. A multidisciplinary team (MDT) was set up. At 27+6 gestation the MDT decided that the patient would benefit from an emergency Lower Segment Caesarean Section (LSCS) and thyroidectomy.

Results: The patient was kept on PTU for 24 hours after. Thyroxine was started two days post operation and calcium supplementation was administered accordingly. The neonate required treatment for hyperthyroidism. Subsequently the child was also noted to be suffering from short stature secondary to growth hormone (GH) deficiency.

Conclusion: Treatment with carbimazole is associated with an increased risk of congenital abnormalities. Radioiodine is contraindicated in pregnancy. Both antibodies and anti-thyroid treatment cross the placenta. Key to good management is the attempt to keep the mother euthyroid without causing foetal hypothyroidism. This case highlights the difficulties encountered when first line medical management fails to achieve an adequate response and surgical options become necessary. A multi-disciplinary team approach, involving endocrinologist, obstetrician, surgeon and paediatrician is necessary.

P.107

The role of Vitamin D in the musculoskeletal system

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Introduction: It is known that circulating Vitamin D predominantly originates from cutaneous synthesis and therefore should be considered as a hormone rather than a vitamin. Vitamin D deficiency (<50nmol/L) is a worldwide epidemic with multiple implications on human health, due to its role in various physiological systems. Various studies have shown that with higher serum 25 hydroxyvitamin D levels, there is a decrease in the incidence of non-vertebral and hip fractures. There is limited research data on the management of vitamin D deficiency using therapeutic doses. The majority of studies focus on lower physiological doses rather than high pharmacological doses. In order to reach serum levels of 75nmol/L from a deficiency state, higher doses than 800 - 1000 IU/day are required.

Conclusion: Future focus should be on the implications of a rise in systemic 25 (OH) D₃ levels from a deficiency state to 75nmol/L on bone density and fracture risk, and the use of high doses in cases of vitamin D deficiency. Vitamin D treatment and supplementation need to be re-evaluated in the light of new evidence suggesting that high pharmacological doses need to be used in order to obtain the desired effect in the prevention of osteoporosis and recurrence of osteoporotic fractures.

P.108

Active management of Ovarian Hyperstimulation Syndrome

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Introduction: Ovarian Hyperstimulation Syndrome (OHSS) is a known complication of assisted reproduction, particularly in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI). It is known to be particularly more common in patients with polycystic ovarian syndrome (PCOS) and those with a positive pregnancy test.

Methods: 200 patients undergoing IVF both at the public and private hospitals were recruited. The demographic details, treatment and outcome of these patients are analysed, and compared to a subset of patients who had mild, moderate and severe OHSS.

Results: Mild OHSS is a common occurrence, while severe OHSS is a very rare. However OHSS cannot be always predicted.

Conclusion: Preventive measures can be taken during patient recruitment, follow-up for follicle tracking, oocyte retrieval, and delayed fertilization and embryo transfer.

P.109

Comparison of outcome using fresh versus frozen oocytes during assisted reproductive technology (ART) cycles - the Maltese experience

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Introduction: Although the use of fresh oocytes for intracytoplasmic sperm injection (ICSI) is preferable, recently there has been an introduction of the use of thawed oocytes following earlier freezing post oocyte harvesting.

Methods:

Vitrification using Kitazato method was carried out on oocytes collected from over 70 patients. Of these, 30 patients had oocytes thawed for a consequent ICSI. These results have been compared to cycles using fresh oocytes in the same patients, and to another cohort where fresh oocytes were used during the same timeframe.

Results: To date, 7 pregnancies have resulted from the injection of thawed oocytes.

Conclusion: Oocyte vitrification has presented a new challenge, however the results are very promising.

P.110

Correlation between pre-pregnancy Anti-Mullerian hormone levels and number of oocytes retrieved in patients with polycystic ovarian syndrome

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Introduction: Polycystic ovarian syndrome (PCOS) is the major causes of infertility due to anovulation. While serum Anti-Mullerian hormone (AMH) is a marker used to assess ovarian reserve and is correlated to the yield of oocytes upon ovarian stimulation, in the case of patients with PCOS, the interpretation

of AMH levels is still controversial. The increased amount of AMH in PCOS is due to an increased number of pre-antral and antral follicles in the polycystic ovary.

Methods: From among the cohort of patients (n=250) attending the ART Clinic at Mater Dei Hospital, a subset of PCOS patients (n=40) was recruited. Their demographics as well as details of their investigations, including serum AMH levels, were recorded and analysed. The response to their in vitro fertilization treatment was observed, especially with regards to the number and quality of the oocytes retrieved.

Results: Patients with PCOS were more likely to hyperstimulate, leading to higher numbers of follicles. In some instances, the patient had to have freezing of all oocytes retrieved, and fertilization by ICSI followed by embryo transfer postponed to a later cycle.

Conclusion: It is hypothesized that the high AMH level present in women with PCOS plays a role in leading to anovulation by inhibiting the actions of follicle-stimulating hormone (FSH).

P.111

Outcome of frozen oocyte cycles - the Maltese experience

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Introduction: Following the enactment of the Embryo Protection Act in December 2013, it has been possible to cryopreserve oocytes following retrieval of oocytes in excess of the number permitted to inject during intracytoplasmic sperm injection (normally 2 oocytes, maximum of 3 in exceptional circumstances). It is also possible to cryopreserve oocytes in cases where the patient is at risk of ovarian hyperstimulation syndrome.

Methods: Frozen oocytes, vitrified using Kitazato method have been thawed and intracytoplasmic sperm injection carried out. The patient parameters leading to successful outcome have been analyzed.

Results: To date, there have been over 30 frozen-thaw cycles, a number of which resulted in a positive outcome.

Conclusion: Thawed oocytes following freezing at retrieval have been successfully injected and led to pregnancy.

P.112

Luteal phase support: progesterone levels and pregnancy outcome

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Introduction: Luteal phase support with exogenous progesterone in assisted conception is a contentious issue. Serum progesterone levels following oocyte retrieval and embryo transfer fluctuate considerably with serum progesterone dropping after oocyte pick up. The aim of this study is to investigate the effect of fluctuations in luteal phase serum progesterone levels on success of assisted conception cycles and to determine the optimal timing and the optimal dose for commencing luteal phase support.

Methods: Two groups of patients undergoing assisted conception were followed up. Progesterone was administered both intramuscularly and via vaginal pessaries. The first group had luteal phase support starting with embryo transfer. The second group of women had luteal phase support starting just after vaginal oocyte retrieval. The progesterone levels were repeated every two days for ten days starting from the day of embryo transfer. On the tenth post embryo transfer day, serum

HCG was measured in order to assess pregnancy. The two patient groups were compared with each other to detect any benefit in preventing the serum progesterone drop after pick up when progesterone support was given just after vaginal oocyte retrieval as opposed to when progesterone support was started at embryo transfer.

Results: A total of 85 cycles were followed up. Dips in serum progesterone levels and the timing of the dips were compared, and difference in pregnancy rates determined.

Conclusion: There was no significant difference between the groups when progesterone support was given just after vaginal oocyte retrieval as opposed to when progesterone support was started at embryo transfer

P.113

Correlation between serum anti mullerian hormone levels and number of oocytes retrieved during IVF cycles

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Introduction: Serum anti-Müllerian hormone (AMH) has been measured to reflect the number of antral and pre-antral follicles present in the ovaries, and thus it has been suggested to predict the ovarian response to hyperstimulation for in vitro fertilization, and to indicate ovarian follicle reserve.

Methods: Female patients with primary infertility (n=120) were recruited between July 2014 and August 2015 upon their first visit at the ART Clinic at Mater Dei Hospital. They had their AMH levels measured by a standard assay. Patients were all of reproductive age (between 25 and 42 years of age) and all were of Maltese origin. These patients eventually underwent ovarian stimulation as part of their IVF treatment, and the number and quality of the oocytes retrieved was recorded.

Results: There is a linear relationship between AMH and oocyte yield after ovarian stimulation.

Conclusion: The positive correlation between AMH and number of oocytes retrieved during IVF is of value in predicting ovarian hyperstimulation. AMH can also identify 'poor responders', however so far it is inappropriate at present to withhold IVF only on the basis of this.

P.114

Diagnosis of aneuploidy using quantitative real-time PCR

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Introduction: Aneuploidy is the most common cause of chromosomal aberration in humans and is known to occur in 75% of foetal loss. Trisomy of chromosome 21, known as Down's syndrome is the most common aneuploidy. Cytogenetic analysis, such as karyotyping is the gold standard method for the diagnosis of aneuploidy. This technique is time-consuming whereas techniques such as FISH, QF-PCR, MLPA and quantitative real-time PCR are more rapid.

Methods: 10 samples from patients with known trisomy 21 and 20 control samples from individuals with a normal karyotype were studied using quantitative RT-PCR using TaqMan probes. Two samples from patients with known trisomy 18 were also analysed. All patients consented to participate in the study. Simultaneous amplification of two genes; *TYMS*

present on chromosome 18 and *APP* present on chromosome 21, was carried out in the same reaction vessel. The two genes were quantified relative to each other using the relative quantification method.

Results: The results show a significant difference between the mean $\Delta\Delta Ct$ of the normal control samples, the trisomy 21 and 18 samples. The results are consistent with the karyotypes of all the samples analysed.

Conclusion: This study shows that RT-PCR can be used as a rapid and sensitive technique for the diagnosis of Trisomy 21. As only 2 samples with trisomy 18 were studied, no conclusion can be drawn on the use of this method in trisomy 18. This method is more rapid and results can be obtained within a few hours eliminating the need for cell culture of a fresh sample.

P.115

Sub-acute bacterial endocarditis in a patient with a history of patent foramen ovale repair

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Introduction: 66 year old lady known case of thalassaemia trait, who had patent foramen ovale repair (2008), was referred after being found to be anaemic while investigating symptoms of increasing lethargy. The patient had been investigated in 2009 for subacute bacterial endocarditis (SBE) and treated using gentamicin and benzylpenicillin. Noting that the patient was febrile without an obvious focus of infection a CT abdomen and pelvis was performed. Blood cultures were taken and *Streptococcus gordonii* was cultivated. The patient was reviewed by the infectious diseases specialists and a provisional diagnosis of SBE was made. A dental review was done where an extraction was performed.

Methods: None

Results: The initial CT scan showed no features of malignancy, however intrapulmonary lesions, cardiomegaly, bilateral small pleural effusions and a non specific splenic nodule (possibly septic embolus) were noted. A trans oesophageal echocardiogram revealed a large flap structure attached to the atrial septum in the right ventricle and possible vegetations were seen. CT pulmonary angiogram done 20 days after presentation to exclude pulmonary embolism following sudden onset of shortness of breath showed patchy opacification in the right mid and lower lung zone, which possibly represented septic embolisation. After review it was decided to treat the patient with a protracted course of Gentamicin and Tazobactam/Piperacillin.

Conclusion: This case highlights the importance of multidisciplinary team management of such complex cases; the importance of taking a good and thorough history and the importance of close follow up in view of how the case evolved.

P.116

Hyperemesis gravidarum in an Insulin dependent diabetic patient

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Introduction: Nausea and vomiting in pregnancy is extremely common. Continuous excessive vomiting during pregnancy is known as hyperemesis gravidarum, the etiology of which is still unclear. Vomiting usually subsides after the first trimester. We report a 35-year old second gravida lady who presented with severe and persistent vomiting at the emergency department. She was admitted to the Obstetrics ward at 11+5 weeks' gestation as she was unwell and unable to tolerate oral fluids or solids. She spent the rest of her pregnancy in hospital during which a combination of anti-emetics were administered, a nasogastric tube was inserted and she also needed parenteral nutrition. However the vomiting continued as she was treatment-resistant.

Conclusion: A number of factors contributed to her severe condition including her long standing insulin dependent Type

1 diabetes causing recurrent unrecognizable hypoglycemic attacks and also gastroparesis which was made worse by the progesterone effect of pregnancy; the increase in pressure of the growing uterus during pregnancy causing an amplification of the acid reflux and psychological factors as she also suffered from depression.

P.117

Pneumomediastinum & subcutaneous emphysema in migrants: a report on three cases travelling on the same boat

Matthias Azzopardi, Anette Portelli, Tonio Piscopo, Sarah Bonello

Department of Medicine, Mater Dei Hospital

Introduction: Three immigrants, originally from West Africa but were residing in Libya for three months prior to presentation, who were crossing the Mediterranean Sea on a dinghy were rescued in the open sea in January 2015. They were admitted at Mater Dei Hospital, Malta in view of severe dehydration, acute kidney injury and respiratory tract infections. Two patients were found to have sepsis and infected wounds peripherally. Two improved with rehydration, one of them required amputation, and two required intravenous antibiotics for a lower respiratory tract infection. Even though none complained of chest pain, pneumomediastinum and subcutaneous emphysema were discovered as incidental findings on chest x-ray. A diagnosis of spontaneous pneumomediastinum was made.

Methods: A discussion of three cases of patients who were found to have pneumomediastinum as incidental findings on their chest X-rays after being rescued following periods of extreme stress. The cases will be compared to each other as well as to other similar cases and several processes that could have potentially lead to the occurrence of spontaneous pneumomediastinum as well as the appropriate management will be discussed.

Conclusion: Following periods of extreme stress, starvation and dehydration, pneumomediastinum could occur spontaneously. The basic pathogenesis behind spontaneous pneumomediastinum is an increased alveolar pressure gradient secondary to a transient increase in intrathoracic pressure.

P.118

Quality of initial management of hypertension

Maria Elena Pawley¹, Myra Tilney²

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Introduction: Hypertension is common, significantly increasing the risk of cardiovascular disease, the commonest cause of morbidity and mortality. Effective management reduces adverse outcomes, and our healthcare system provides tools for this. We assessed whether these are being applied effectively, using NICE Guidelines (2011). These recommend the following baseline assessments for newly diagnosed hypertensives: Modifiable risk factors for IHD (fasting blood glucose, lipid profile) Renal function assessment for possible secondary damage (renal profile, Albumen-creatinine ratio (ACR), assessment for haematuria) ECG for possible secondary left ventricular hypertrophy

Methods: A protocol was prepared, and data protection approval obtained. Consecutive patients (n=40) for newly diagnosed hypertension referred to medical consultant (MCC)/schedule V clinics in Floriana and Gzira Health Centres were reviewed in March 2015, identifying whether these recommendations had been met prior to their appointment. Data were anonymised at source, with no patient or referral source data collected.

Results: 75% had been assessed for modifiable risk factors within the previous two years; 7.5% had a documented urinalysis, or ACR, and 7.5% had had an ECG recording. These results have been copied to the Department as per data protection approval.

P.119

Mechanisms in tumour metastasis & methods aimed at slowing down/arresting the metastatic cascade

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Introduction: Metastasis is the process wherein malignant neoplastic tissue disseminates to a body region/s, remote from the site of the primary tumour. It is the leading cause of mortality in cancer patients, and research about new methods of inhibiting tumour dissemination is thus the focal point, in attempting to improve cancer survival rates. Metastasis is a mutation driven process: it is triggered by the upregulation/ downregulation of genes which gives cancer cells the predisposition to disseminate. Invasion of tumour cells through the extracellular matrix (ECM) then occurs via changes in the cell cadherin structure, and release of metalloproteinases and cathepsins, which cause degradation of the ECM. Motility factors are produced, which induce cytoskeletal changes, and thus migration of tumour cells through the ECM. Once in the bloodstream, a number of mechanisms, namely selection of antigen-negative tumour cells, and programmed cell death of cytotoxic T cells, help tumour cells escape the host's immune system. Once at the site of secondary tumour formation, tumour cells attach to the endothelium, and trans-endothelial migration and extravasation follow. Angiogenic growth factors are produced, triggering new blood vessel formation (angiogenesis).

Conclusion: Metastasis is the leading cause of mortality in cancer patients, and the mechanisms involved are thus receiving increased attention in the research field. Angiogenesis has already been a fruitful target area, with the development of bevacizumab, an anti-VEGF and anti-angiogenic drug. While other methods to arrest tumour metastasis to date remain limited, various steps within the metastatic cascade remain promising target areas, for slowing down tumour dissemination.

P.120

Transplants in ophthalmology with an emphasis on partial thickness (lamellar) corneal transplants

Anthony Victor Spiteri

Department of Ophthalmology

Introduction: A global paradigm shift has been underway for over a decade in the field of Ophthalmological transplants. Partial thickness (lamellar) transplants now make up over 80% of corneal transplants in developed countries compared to full thickness (penetrating keratoplasties). With the Maltese Government's current drive to improve transplantology across all medical specialties, introduction of the former technique locally is a timely occurrence.

Methods: A descriptive overview of transplants in Ophthalmology is laid out. Autografts range from autologous plasma as tear substitutes for severe dry eyes, to conjunctival autografts in pterygium surgery. In lid surgery, buccal mucosal transplants are used in reconstructing conjunctival fornices, while free pre-auricular grafts are used for the anterior lid. Tensor fascia lata strips are used in congenital ptosis. Allograft transplantation includes amniotic membrane transplants for persistent epithelial defects, to scleral patches preventing tube extrusion in glaucoma surgery. The avascular cornea is an immunologically privileged site allowing transplantation to occur without tissue typing and with minimal postoperative topical immunosuppression for the prevention of rejection.

Results: Lamellar corneal transplants present minimal host antigenic load reducing rejection rates to around 2% (compared to full thickness >10%). Graft failure is also significantly reduced and in the case of posterior (endothelial) keratoplasty the virtually sutureless technique allows significantly reduced postoperative recovery times (weeks versus years) and almost instant visual rehabilitation.

Conclusion: The introduction of new transplantology techniques in Malta promises exciting times for local Ophthalmology, reduced costs to hospital budgets and workforce hours from faster visual rehabilitation, and most importantly improved patient quality of life.

P.121

The role of FMR1 gene and autoimmunity in infertility

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Introduction: The importance of genetic polymorphisms and autoimmune factors in infertility is still uncertain. The long arm of chromosome X is important in the control of functional ovarian reserve and the FMR1 gene at Xq17.3 is known to be associated with early menopause and diminished ovarian reserve. Reproductive failure and diminished ovarian reserve may be associated with the number of CGG repeats on the FMR1 gene. Anti-Mullerian hormone (AMH) is used to evaluate ovarian reserve as it is a predictor as well as a reflection of both ovarian reserve and ovarian function. Previous studies have shown that there is a statistical correlation between AMH and CGG repeat size in the FMR1 gene in the premutation range. Genes on the X chromosome have a well-known association with autoimmune conditions, which are known to have a significant impact on female reproductive success.

Methods: A total of 100 Female patients with a history of primary or secondary infertility, of unknown cause were consented. Clinical history and blood samples for immunological parameters, hormonal profile, AMH, cytokines, and FMR1 genotyping were taken. The CGG repeat size of the FMR1 gene was studied by PCR using primers across the CGG repeat in exon 1. Cytokine assay for IL-2, IL-4, IL-6, IL-8, IL-10, IFN- γ , TNF- α will be done by luminex Bio-Plex Pco®.

Results: The clinical features and hormonal levels including AMH will be correlated to the level of cytokines as well as to the results from FMR1 genotyping.

Disclosure: Sponsorship: Libyan Embassy in Malta

P.122

Laparoscopic surgical management of endometrioid cysts

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Introduction: Endometriosis is a common problem affecting women presenting with pelvic pain, dyspareunia and fertility delay. Endometrioid cysts occur when endometrial tissue grows inside the ovaries. In this study we assessed the size of endometriotic cysts that are resected laparoscopically, and the method of removal and how haemostasis is achieved.

Methods: All patients who have ovarian cysts undergo an endovaginal ultrasound. Patients whose cysts are diagnosed as being endometriotic are admitted for therapeutic laparoscopy. The endometriotic cyst is dissected laparoscopically and removed either through the posterior fornix or through one of the abdominal ports using endobag. Haemostasis at the base of the endometriotic cyst is secured either by electrocautery or by laparoscopic suture

Results: There were 28 endometrioid cysts which were removed laparoscopically with most of the cases having had suturing of the ovary to secure haemostasis.

Conclusion: Operative laparoscopic surgery for endometrioid cysts offers pain relief and improved fertility, avoiding the more radical option of oophorectomy.

P.123

Setting up an early pregnancy assessment unit at Mater Dei Hospital- an optional extra or a necessity?

Helga Consiglio¹, Carmen Portelli², Mark Formosa^{2 1}

Introduction: Bleeding and/or pain in early pregnancy are amongst the commonest causes for referral to Gynaecology emergency service. They are time-consuming in a system that covers both advanced obstetrics and gynaecology emergencies. In addition, miscarriage and ectopic pregnancies take a financial toll in terms of inpatient admission as well as theatre use. Moreover, since miscarriage is so common, its effect on women's physical and psychological health are greatly underestimated. On the other hand, ectopic pregnancy still remains a potentially life-threatening emergency, albeit not all patients need inpatient care.

Methods: It is well recognized that in units where there is a dedicated Early Pregnancy Assessment Unit (EPAU), early pregnancy problems in stable patients are dealt with efficiently and in an organized but more sensitive manner. Admissions and surgery are resorted to less often with considerable advantage to both patients and hospitals alike.

Results: On our unit, all staff strive to provide good-quality care, but the time-constraints, lack of appropriate setup and protocols, and the absence of written information for patients significantly limits the service provided.

Conclusion: An audit of patients seen at emergency obstetrics ward is currently underway to compare the standard of care delivered to patients with that recommended by the RCOG and AEPU. It is anticipated that the audit will make a case for the setting up of an EPAU by improving quality of care whilst reducing the need for admission and surgery.

P.124

Right ventricular outflow tract stenting – effective palliation for Fallot's tetralogy

Joseph DeGiovanni, Justine Bugeja, Victor Grech

Introduction: Traditionally, the management of patients with Fallot's tetralogy (TOF) with excessively reduced pulmonary flow and cyanosis has been complete repair or palliation until complete repair. Palliation involves a procedure that augments pulmonary flow. The latter may be more practical and/or safer in small babies and/or associated lesions. Palliation in such cases has usually consisted of a surgical systemic to pulmonary shunt or transcatheter stenting of the arterial duct. Both have disadvantages. Transcatheter stenting of the right ventricular outflow tract (RVOT) is gaining popularity as this results in a more physiological haemodynamic result and encourages the growth of small pulmonary arteries, providing a better surgical substrate for subsequent repair.

Conclusion: We present a Maltese preterm baby (gestation 31/40) with TOF who required intervention at 5 weeks of age due to slowly deteriorating saturations. Weight was 1.85kg. A bare metal stent was implanted across the RVOT (3 mm by 13 mm) with resolution of intermittent desaturations. This will allow the baby to grow into a suitable weight for eventual Fallot surgery.

P.125

Bendy stents help negotiate hairpin intracardiac curves

Justine Bugeja, Victor Grech, Alexander Borg, Joseph DeGiovanni

Introduction: Simple transposition of the great arteries (TGA) occurs in 0.2 per 1000 live births. The condition is surgically repaired in the neonatal period by the arterial switch procedure (ASO). This involves stretching of the pulmonary arteries since the pulmonary trunk must be displaced anteriorly during surgery. Pulmonary artery stenosis is a recognised complication. Surgical repair is associated with high recurrence

rates. Ballooning and stenting is currently the most satisfactory option. This may involve negotiating tight bends in order to reach the site of stenosis. The passage of non-premounted stents may be problematic in such situations, especially with longer stents and tighter bends.

Conclusion: We describe several techniques that may facilitate such interventions and these were utilised in an adolescent patient who had had ASO for TGA in the neonatal period. These included manually giving the mounted stent a slight bend in order to help the balloon-stent combination negotiate hairpin bends.

P.126

Preparing to deal with an Ebola case in Malta?

Tanya Melillo, Maria Borg, Maya Podesta, Jackie Maistre Melillo, charmaine Gauci

Infectious Disease Prevention and Control Unit, Department of Health Promotion and Disease Prevention

Introduction: Ebola virus disease, one of the viral haemorrhagic fevers, causes an acute, serious illness which is often fatal in humans. A huge outbreak started in West Africa in March 2014 resulting over 28,000 cases and 11,000 deaths to date. Though concentrated in 3 countries in West Africa, the disease travelled to other countries, including America and Europe. Malta, like all other countries in the world had to prepare for the eventuality of a case reaching our shores due to international travel. The Ebola preparedness and response plan prepared by the Infectious Disease Prevention and Control Unit (IDCU) involved different sectors within the Ministry of Health.

Conclusion: The plan involved preparing a case definition and protocols for all doctors to use for early detection of suspected cases, risk assessment and contact tracing protocols for IDCU doctors, procuring the necessary personal protective clothing (PPEs), training of staff to wear PPE, setting up a room in the infectious disease ward to cater for potential cases, providing information on the infection to healthcare workers, procurement of diagnostic laboratory kits with transport containers and infection control equipment. Efforts made by IDCU doctors to increase awareness among the general public included leaflets, setting a helpline, posters at the airport and ports, announcement on flights and training workers in other entities. Public health measures included screening and monitoring of persons coming from the affected countries. To prepare such a plan, the Health Department worked hand in hand with other entities and undertook a number of simulation exercises.

P.127

Middle East Respiratory Syndrome Coronavirus (MERS-CoV): do we need to be prepared?

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Infectious Disease Prevention and Control Unit, Department of Health Promotion and Disease Prevention

Introduction: MERS is a novel viral respiratory infection identified in Saudi Arabia in September 2012. Since then, over 1500 cases have been reported from 26 countries. It is transmitted from person-to-person through direct contact with respiratory secretions. It typically presents as a non-specific febrile respiratory tract infection that can progress rapidly to respiratory failure. Under the International Health Regulations, Malta is obliged to notify confirmed cases and ensure that the necessary Public Health measures are in place for prompt detection and response to prevent further spread of disease. With increased global travel and mass migration, the risk of such an infection reaching our shores is possible and therefore it is necessary to be prepared.

Conclusion: The Infectious Disease Prevention and Control Unit plays a pivotal role in ensuring that all medical doctors are provided with the necessary information to enable them to promptly detect and notify a suspected case. Early

identification and management of cases and their contacts limits transmission of infection and so efforts have been ongoing to increase awareness about MERS amongst healthcare workers and the public. This includes drafting of protocols on detection and management of cases and contacts as well as information on necessary preventive protective clothing required to prevent spread of infection. Critical to an effective response is ensuring that the necessary laboratory diagnostic tests are available and that all frontlines are trained on how to gown and de-gown and to prevent spread of infection.

Disclosure: none

P.128

Elastography - a powerful tool for early prediction of a high risk preterm birth? A literature review

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Introduction: Preterm labor is defined as premature birth before 37 completed weeks of gestation and is the major cause of neonatal morbidity and mortality with 1.1 million infant deaths from its complications. Risk assessment of a spontaneous preterm delivery (PTD) is still a challenging and an unresolved problem. Elastography is a relatively new ultrasound-based technique that creates images of tissue stiffness on a color map. There is a strain elastography with pressure-responsive tissue displacement and a shear wave elastography measuring the speed of shear waves traversing the tissue. The aim of this study was to review the value of cervical elastography to predict high risk of the preterm labor in both asymptomatic and symptomatic women.

Methods: A search of the PubMed/Medline database for terms 'preterm delivery', 'preterm labor' in association with 'cervical elastography' restricted to English language studies between 2010-2015.

Results: Elastography allowed for easy correlation between colour distribution and the anatomical structures image. Increasing gestational age was accompanied by reduction in internal cervical os stiffness and decrease in cervical length. Elastographic assessment of the internal cervical os may identify patients with high risk of preterm delivery at the early stage preceding other ultrasound and clinical findings.

Conclusion: This method has the potential to be used as a tool to evaluate the risk of preterm delivery as early as at 18th week of gestation. Proper selection of high risk patients may facilitate good management, decrease the number of preterm labors and unnecessary hospitalizations.

P.129

A rare giant borderline endocervical type mucinous ovarian tumour: a case report and review of the literature

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Introduction: Herein, we present the case of a 26 year old nulliparous female with a very large mucinous ovarian tumour. The patient presented at a late stage, when the cyst had accrued more than ten litres of fluid and when her abdomen was comparable to that of a term pregnancy. Radiological assessment confirmed the presence of a large cyst arising from the right ovary and occupying the whole abdomen, causing organ compression. The cyst was completely excised from the right ovary following cyst drainage with a Veress needle. Histology confirmed the lesion to be a borderline mucinous ovarian tumour, endocervical type. To our knowledge, this is the largest borderline mucinous ovarian tumour ever recorded. We discuss the case in detail, together with an update on pathogenesis and treatment of this uncommon disease.

Conclusion: Borderline mucinous epithelial tumours are a rare pathological entity, and endocervical subvariants

reaching this size are exceedingly rare indeed. They represent, however, a variant of ovarian malignancy which has an excellent overall prognosis, even when associated with epithelial invasion and lymph node metastasis. Highly conservative treatment strategies are available in fertile women, although more radical treatment is favoured in older individuals. Regular follow up is critical in these patients for early assessment of recurrence, should this occur.

P.130

Imatinib mesylate-induced acute generalized exanthematous pustulosis

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Introduction: An 86 year old elderly lady presented to a general oncology clinic in view of fever, together with a generalized pruritic maculopapular red-violet rash with overlying pustule formation, shortly after having been started on imatinib mesylate for CD117-positive gastrointestinal stromal malignancy. She was found to have raised white cell counts and inflammatory markers, but infective serology screening was negative. A biopsy of the pustular lesions demonstrated subcorneal pustules with neutrophilic infiltration, together with diffuse papillary dermal oedema and mixed inflammatory cell infiltrate, confirming the diagnosis of acute generalised exanthematous pustulosis. Imatinib mesylate was discontinued and the patient was admitted for hydration and corticosteroid application. She suffered acute renal failure as a complication of the condition, which required referral to an acute medical hospital. She made a full recovery with complete resolution of the rash and biochemical parameters.

Conclusion: Acute generalized exanthematous pustulosis (AGEP) is a rare skin condition, marked by the formation of numerous small sterile pustules over an erythematous background, often associated with fever and neutrophilia. The vast majority of cases are drug-related reactions, although viruses and other non-specific agents have also been implicated. The disease is rarely fatal, often demonstrating a self-limiting pattern of disease, with complete resolution within a couple of weeks on withdrawing the offending agent. We describe the case of an 86 year old lady with gastrointestinal stromal malignancy, who developed AGEP shortly following treatment with imatinib mesylate; an agent which has been associated with AGEP on exceedingly rare occasions.

P.131

Cross border health threats-what is our role?

Maya Podesta, Tanya Melillo, Maria Borg, charmaine Gauci, Jackie Maistre Melillo

Infectious disease prevention and control, Department of Health Promotion and Disease prevention

Introduction: The increasing rate, rapidity and volume of global travel and trade is facilitating the potential for pathogens to spread faster worldwide with the possibility of a newly discovered pathogen travelling to the rest of the world within 24-48 hours. According to the EU directive 1082/2013/EU, all European Member States need to be prepared to deal with any health threats that may spread between countries. The International Health Regulations (IHR) which came into force in June 2007, obliges Malta to respond to acute public health risks that have the potential to cross borders and threaten people globally.

Conclusion: The Infectious Disease Prevention and Control Unit (IDCU) has been tasked with preparing a generic preparedness and response plan for the Health Department in order to be able to respond to all types of threats that may be caused by natural disasters, climate change, man made and BCRN (biological, chemical, radiological and nuclear) threats. The aim of the plan is to ensure that the necessary capacities are in place to deal with a public health emergency. The plan is based on 5 main pillars: Mitigation/Prevention; Preparedness;

Response; Business continuity and Communications. The process of managing an emergency involves detecting the event, undertaking a rapid risk assessment, followed by the operational response which includes planning, distribution of roles and responsibilities, management of information, logistics, communications and evaluation of response. The plan incorporates all entities within and outside Health that play an active role during such emergencies.

Disclosure: none

P.132

Pilonidal sinus disease of the scalp

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Introduction: Pilonidal disease of the scalp is an exceedingly rare phenomenon. We describe the case of a 37-year-old female who presented with a longstanding history of a lump on the posterior aspect of the scalp, which was excised successfully. Histology demonstrated the presence of a pilonidal sinus. The report reviews the modern understanding of this condition and collates previous cases of pilonidal disease of the scalp.

Conclusion: This case described the rare phenomenon of pilonidal disease of the scalp, which was successfully treated. Hence, pilonidal disease should be included in any differential diagnosis of scalp lumps.

P.133

Outbreak of gastroenteritis following dinner at a band club, Malta, October 2014

Maria Louise Borg, Anthony Gatt, Annalise Buttigieg

Infectious Disease Prevention and Control Unit, Health Promotion and Disease Prevention Directorate

Introduction: On 12th October 2014, we were notified from Casualty of 4 people who presented with gastroenteritis following a dinner night organised by a local band club on Friday night. Eighty people attended the event and more people were reportedly symptomatic. An outbreak control team was set up to investigate the outbreak and implement timely control measures.

Methods: We conducted a retrospective cohort study to find additional cases and identify the source of the outbreak. Cases were defined as individuals who developed gastroenteritis within 2 days following the dinner at the band club on 10th October 2014. As the organisers had no details of the individuals who attended the event, a message was posted on the event web-page advising attendees to contact our unit. We followed up attendees and completed questionnaires on symptoms and food consumed by means of telephone interviews. We analysed data and calculated risk ratios (RR) and 95% confidence intervals (95%CI) to identify potential risk factors.

Results: Forty-two (53%) of the attendees were interviewed. Of these 26 (62%) were cases. Consumption of frozen seafood, particularly mussels (RR=3.2; 95%CI=1.2-8.6) and prawns (RR=3.9; 95%CI=1.1-15.6) was significantly associated with illness. None of those who did not eat seafood developed symptoms. No leftover food was available for analysis. Salmonella infantis was isolated in 5 of the submitted stool specimens.

Conclusion: This investigation highlights the important role of social media in outbreak investigations. In the absence of environmental findings, the epidemiological study proved crucial in identifying seafood as the likely source of infection.

P.134

A case of pulsatile tinnitus from ipsilateral carotid artery stenosis

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Introduction: Atherosclerotic carotid artery disease is a recognised cause of pulsatile tinnitus. Carotid endarterectomy is one method of improving pulsatile tinnitus in patients with unilateral symptoms and severe ipsilateral stenosis. We present a case of ipsilateral pulsatile tinnitus which was successfully treated with an elective left carotid endarterectomy.

Methods: A 69 year old lady was seen at the Vascular Outpatient Clinic after suffering with severe tinnitus in her left ear for twelve months. Examination of her external ears and cranial nerves was unremarkable but a left sided systolic carotid bruit was present.

Results: Carotid Doppler ultrasounds were organised and these showed an approximate stenosis of 50% at the origin of the left external carotid artery. The patient opted to proceed to surgery if this would at all relieve her symptoms. A CT angiogram of the aortic arch and carotids and an MRI of the internal auditory meatus were done pre-operatively to ensure there was no other cause of her symptoms.

Conclusion: Tinnitus is the perception of non-verbal sound for which there is no external source or stimulus to the body present. Atherosclerotic carotid artery disease is one of the three most common causes of tinnitus. It should be suspected as the cause in patients older than 50 years and when atherosclerotic risk factors are present.

P.135

A rare cause of upper gastrointestinal bleeding - giant Brunneroma

Martha Dimech, Ruth Scicluna, Jo Etienne Abela

Department of Surgery, Mater Dei Hospital

Introduction: A 53 year old male with a family history of colon carcinoma presented with vague epigastric discomfort and black stools. Physical examination was unremarkable. Faecal Occult Blood (FOB) testing was consistently negative. Haemoglobin, platelet count, liver function tests and tumour markers (CEA and CA19-9) were within normal limits. At oesophagogastroduodenoscopy (OGD) we encountered an 8cms polypoid lesion on a wide base extending from the pylorus down to the third part of the duodenum. Using tripod forceps, the lesion was retracted back into the stomach and an attempt was made to snare it piecemeal however the lesion was exceedingly hard to divide with the hot snare and after two resections the procedure had to be abandoned. Histology confirmed Brunner's gland hyperplasia/hamartoma and the patient was subsequently treated with laparoscopic distal gastrectomy.

Conclusion: Disproportionate overgrowth of Brunner's glands results in hyperplasia although adenoma, hamartoma and Brunneroma are sometimes used interchangeably. Diagnosed predominantly in the fifth or sixth decade of life and with no difference in gender distribution, Brunner's gland hyperplasia represents around 5-10% of duodenal tumours and although typically asymptomatic, can easily be confused with other pathologies resulting in upper GI bleeding. Complications of obstructive jaundice, intussusception, biliary fistulas and haemorrhagic shock can arise. There is dysplastic potential within such lesions and it is dangerous to assume that all large Brunneromas are non-neoplastic. In a patient who is fit for surgery, we advocate resection.

Severe pre-eclampsia in the context of posterior reversible encephalopathy syndrome (PRES).

Maria Petra Agius, Nicholas Felice, Maria Mallia, Yves Muscat Baron

Mater dei Hospital

Introduction: We present a case of severe pre eclampsia associated with PRES in a twin pregnancy.

32 year old primagravida, presented at 27+3 weeks gestation with hypertension (204/129mmHg), proteinuria (4+), severe headaches, vomiting and loss of vision. She was admitted to labour ward and started on dexamethasone, intravenous hydralazine and magnesium sulphate. Neurological examination revealed hyper-reflexia and 3 beats of clonus. MRI head showed bilateral hyperintensities in the parieto-occipital regions affecting the cortex and subcortical white matter together with petechial haemorrhages in the occipital lobe, suggestive of PRES.

Methods: After 4 hours of continuous monitoring, the blood pressure and patient's symptoms did not improve and she was consented for an emergency lower segment caesarean section. Both infants weighing 560g and 850g were transferred to neonatal intensive care unit, whilst the mother was kept intubated and managed in an intensive care unit. Her vision recovered after 24 hours with her blood pressure was reduced by labetalol and nifedipine. However, proteinuria persisted and her blood pressure control was still sub-optimal.

Results: She was discharged 12 days later on calcium channel blockers and followed up by a nephrologist. One of the infants died of severe necrotising enterocolitis.

Conclusion: Pre-eclampsia is a not uncommon disorder of pregnancy. Early diagnosis, adequate monitoring and treatment can prevent long-term complications associated with the condition.

Disclosure: n/a

P.137

Inclusion epidermal cysts: a late complication of childhood female genital mutilation

Sarah Sultana Gixti, Joanna Ghigo, Judith Mifsud, Alberto Vella

Department of Obstetrics and Gynaecology

Introduction: Female genital mutilation (FGM) is a non-medical procedure performed by some cultures rooted in gender inequality. This case report aims to increase awareness regarding epidermal inclusion cysts as a late complication of FGM.

Methods: We hereby report a case of a 23 year old Eritrean lady who presented to A&E with fresh vaginal bleeding and severe genital pain radiating to right thigh and lower abdomen. The patient was being followed-up regarding the presence of the vulval cyst. The cyst had been presented since childhood and was otherwise asymptomatic. It had increased in size during pregnancy. The pain had increased considerably over the past days and she was unable to walk. She was able to pass urine with some difficulty. Inspection of the perineum revealed a 15cm cystic mass originating from the residual clitoral hood area. The mass was draining pus and blood. The patient was thus admitted, treated with intravenous antibiotics and pain relief with a view for exploration of the mass in theatre. At operation the origin of the mass was confirmed. The abscess wall was sent for histology. The histological findings were compatible with a diagnosis of secondary infection of an inclusion epidermal cyst.

Results: The patient experienced an otherwise uneventful recovery and was discharged home on oral antibiotics.

Conclusion: Epidermal inclusion cysts are usually slow growing and relatively asymptomatic. Malignancy despite rare has also been reported within epidermal inclusion cysts. Excision of inclusion epidermal cysts is indicated in cases of secondary infection or when there is a suspicion of malignancy. Treating Unilateral Vocal Cord Palsy: A Case Study. Imed Ben Moussa¹, Charlene Plumpton², Mario Said¹. ¹Mater Dei Hospital - ENT Department, ²Mater Dei Hospital - ENT department

Introduction: Vocal cord palsy is a well known sequela to thyroid surgery. Conservative management is the first approach to treating symptoms. However, in patients who do not respond to these measures, surgical options are available. This case study focuses on vocal fold medialisation using a Kurz

titanium implant under local anaesthesia. The aim is to compare pre-operative and post-operative perceptual, acoustic and video cinematographic parameters in a patient with unilateral vocal cord palsy who underwent vocal fold medialisation using a Kurz titanium implant under local anaesthesia.

Methods: The patient was diagnosed with right vocal cord palsy post right hemithyroidectomy, not responding to conservative measures. Patient consent to take part in the study was established. Preoperative testing using nasendoscopy and voice spectrography using PRAAT software for objective voice analysis and a questionnaire were used. During the procedure, photos of the steps involved in thyroplasty were taken. Post operatively, nasoendoscopy, voice spectrography and the questionnaire were repeated post operatively and after 3 months. The steps involved in the above procedure were illustrated using video recordings of the procedure.

Results: Significant patient satisfaction and improvement in voice quality and cord medialisation were noted and recorded as objective outcomes.

Conclusion: The results show that there is a significant improvement in patient satisfaction and quality of life. This is supported by the objective assessment used. This case study evaluation will be replicated to future prospective patients undergoing the same procedure. An audit will then be devised to assess and document outcomes

P.139

Metastatic squamous cell carcinoma of unknown origin to right atrium

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Introduction: We describe a case of metastasis to the heart, which was initially suspected to be a myxoma causing acute right heart failure. The histology showed a metastatic squamous cell carcinoma possibly of head and neck origin. Various investigations were performed with no primary source identified. Description and differential diagnosis: A 66 year-old male with a past history of hypertension, hyperlipidaemia and insulin dependent diabetes mellitus, presented with sudden onset of shortness of breath with recent episodes of orthopnea and fainting. On examination he was tachypnoeic and tachycardic with clear breath sounds bilaterally. He was also noted to have right upper limb and facial swelling as well as distended neck and chest wall veins. A CT-Pulmonary Angiogram was carried out to exclude pulmonary embolism, revealing a mass in the right atrium which extended up the superior vena cava (SVC) and into the azygos vein. Transthoracic echocardiography was performed, revealing a large right atrial mass prolapsing across the tricuspid valve and compromising right ventricular filling. A transoesophageal echocardiogram revealed mass considered to be a large right atrial myxoma attached to the inter-atrial septum. The possibility of other cardiac tumor could not be excluded, especially since there was involvement of the SVC, which is unlikely in a myxoma. Patient underwent an emergency removal of the mass in view of his symptoms.

Conclusion: Metastatic squamous cell carcinoma of unknown origin to right heart is very rare occurrence with only few cases reported previously in literature and carries very poor prognosis.

P.140

Eagle Syndrome: A case of ossification of the stylohyoid ligament

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Introduction: Eagle Syndrome was first described in 1937 by W.W. Eagle as an aggregate of symptoms that include recurrent throat or facial pain, foreign body sensation and dysphagia. This is caused as a direct result of an elongated styloid process or calcified stylohyoid ligament. Diagnosis of Eagle Syndrome is made by symptoms correlated to physical examination and radiographic findings. Calcification or ossification of the stylohyoid ligament is often an incidental finding on radiographs (4%), however this is termed Eagle's syndrome when the patient is symptomatic.

Methods: A 37 year old gentleman referred to ENT by his dentist with a visible accessory bone on orthopantomogram for submandibular pain. He gave a 4 month history of pain over the left submandibular area. Onset of symptoms was vague and the patient could not attribute it to a specific event. The pain was aggravated by yawning, opening of the mouth and eating and was referred to the left ear and left side of the neck.

Results: On physical examination, there was palpable tenderness in the peritonsillar area but no palpable masses. Neck and mouth examination was otherwise unremarkable. A CT scan of the neck and mandible showed a heavily ossified styloid process and stylohyoid ligament in its entirety.

Conclusion: Management options are non-surgical or surgical. Non-surgical options are limited to symptomatic relief, however in view of the significant symptoms, the age of the patient and the effect on quality of life, surgery is highly indicated. Surgery is either through the transpharyngeal approach or the extra oral route.

P.141

Imaging Systemic Sclerosis - an illustrative review for the trainee and general radiologist.

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Introduction: To discuss and illustrate the imaging findings of the pulmonary, gastrointestinal and musculoskeletal manifestations of diffuse systemic sclerosis (dSSc).

Methods: A review of cases of dSSc compiled by our imaging department were performed.

Results: *Pulmonary manifestations:* The chest radiograph is insensitive to early changes. High-resolution computed tomography scanning is more sensitive in detecting early interstitial disease, and is the best imaging test for assessing the extent and severity of pulmonary disease. Early findings include ground glass change. Honeycombing and evidence of lung volume loss represent late findings. Features of pulmonary hypertension may also be noted. *Gastrointestinal manifestations:* The commonest site to be affected is the oesophagus. Findings on barium studies include dilatation of distal 2/3 of the oesophagus; apparent shortening of length due to fibrosis; dysmotility of lower oesophagus and gastro-oesophageal reflux due to reduced sphincter tone. dSSc produces atrophy of the muscularis of the small bowel. The jejunum and duodenum are more severely involved than the ileum. The valvulae conniventes are normal or thinned. The features of the affected colon are dilatation, loss of haustrations, wide-mouthed diverticulae on the anti-mesenteric border, and pneumatosis intestinalis. *Musculoskeletal manifestations:* The hands are the most common site of involvement. Bone findings on plain films include acro-osteolysis; periarticular osteoporosis; joint space narrowing and erosions. Soft tissue changes include

subcutaneous and periarticular calcification; atrophy especially at tips of fingers and flexion contractures.

Conclusion: The radiologist should be aware of the vast radiological abnormalities in the different organ systems in dSSc particularly assessment of the potentially fatal pulmonary complications. Thrombocytopaenia in Pregnancy – a case report Greta Mattocks¹, Alison Micallef Fava², John Mamo³, Alex Gatt⁴, Abigail Magro⁵, Daliso Chetcuti⁶ ¹Foundation Year 1 Doctor, Mater Dei Hospital, ²Resident Specialist, Department of Obstetrics and Gynaecology, Mater Dei Hospital. ³Consultant, Department of Obstetrics and Gynaecology, Mater Dei Hospital. ⁴Consultant haematologist, Department of Pathology, Mater Dei Hospital ⁵Foundation Year 1 Doctor, Mater Dei Hospital ⁶Higher Specialist Trainee, Department of Obstetrics and Gynaecology, Mater Dei Hospital

Introduction: Thrombocytopaenia is the second most common haematological problem in pregnancy, surpassed only by anaemia. It is defined as a platelet count of less than 150,000/ μ L, but the risk of bleeding significantly increases as the platelet count drops below 20,000/ μ L.

Methods: This case involves a 31 year old patient in her second pregnancy who was diagnosed with thrombocytopaenia during routine antenatal testing at 13 weeks. She was asymptomatic; blood pressure was normal and no proteinuria was present. The other investigations were all normal. The patient was followed up by a multidisciplinary team (MDT) involving the caring obstetrician, haematologist and obstetric anaesthetist. She was diagnosed with pregnancy related immune thrombocytopaenia. Serial platelet counts were taken and the platelet count progressively decreased reaching 20,000/ μ L at 36 weeks. She never had episodes of bleeding. At 38 weeks she received 0.4g/kg of intravenous immunoglobulin for 5 days. Delivery was uneventful and the neonate was followed up with platelet counts and cerebral ultrasound.

Conclusion: Maternal immune thrombocytopaenia occurs due to an autoimmune process by which patients produce IgG antiplatelet antibodies to the membrane glycoproteins of their own platelets. These platelets are then destroyed by the reticuloendothelial system, mostly by the spleen and at a faster rate than platelet production, which causes thrombocytopaenia. As discussed, the involvement of the MDT is important to prevent the complications of ITP in pregnancy, antenatally, during delivery (especially as regards mode of delivery and the use of methods of analgesia), in the postpartum period and in the care of the neonate.

P.143

A case of Todani type II choledochal diverticulum

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Introduction: Choledochal cysts (CDCs) are rare congenital malformations of the biliary ducts and belong to a class of anomalies known as the fibropolycystic disorders. The incidence in Western countries varies between 1 in 100,000 and 1 in 150,000. Here we report the case of a Todani Type II cyst in a 70 year old gentleman.

Methods: PubMed was used to conduct a literature review. Choledochal; Diverticulum; Cyst; Todani Classification were used to generate results. Patient records and imaging through our local PACS system were consulted for our case report.

Results: A search on PubMed generated 178 cases, 17 of which were relevant to our case.

Conclusion: Todani Type II choledochal diverticuli are rare, making up just 2% of all choledochal cysts, which in turn have an incidence of 1 in 150,000. Our case was atypical in view of the patient remaining asymptomatic, with the cyst identified incidentally on CT - scanning. We present a review of the literature and a consideration for the embryogenesis of biliary anatomy and cyst formation.

P.144

Atrial septostomy for the treatment of pulmonary hypertension and diastolic dysfunction

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Introduction: Atrial septostomy (AS) is a technique indicated in selected patients with refractory right ventricular (RV) failure and pulmonary hypertension. The formation of an iatrogenic interatrial septal defect in these patients has been shown to improve cardiac output and improve RV function. sfgbh

Methods:	Case	Report
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We report a case of a 68 year old lady who had signs and symptoms of right heart failure and raised pulmonary pressures that were refractory to conventional medical treatment. Echocardiography showed severe biatrial dilatation, severe diastolic dysfunction, an impaired RV function and significant pulmonary hypertension. In order to relieve the increased right heart pressures, a percutaneous AS was successfully performed. Within a few days of the procedure the patient's symptoms improved considerably as did echocardiographic parameters.

Discussion: The procedure of percutaneous AS involves the creation of an iatrogenic interatrial septal defect, thereby creating a right-to-left shunt. The interatrial septum is punctured and the defect is progressively dilated with a balloon of increasing size, thereby dilating the defect gradually. This allows control over the size of the shunt created and ensures adequate oxygenation of arterial blood. A fenestrated septal device is then deployed that allows shunting of blood while maintaining the defect at its required size. The decrease in systemic oxygen saturation brought about by the shunt is compensated for by an increase in cardiac output.

Conclusion: AS has been shown to have a beneficial effect on refractory pulmonary hypertension with symptomatic benefit, and should be considered as adjunctive treatment in selected patients.

P.145

“Had I only known...” - The lived experience of coronary artery bypass graft in Maltese men.

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Introduction: Cardiac surgery is frequently described as a “multidimensional phenomenon”; spanning over the biological, psychological and social fields. Coronary artery bypass graft (CABG) is well known to encompass extensive stress and emotions on the patient. There is however, a paucity of psychosocial literature on the Maltese patient's experiences of this procedure. This study therefore aimed to explore the lived experience of undergoing CABG in Maltese men.

Methods: A qualitative approach, namely Interpretative Phenomenological Analysis (IPA) was used and audio recorded semi-structured individual interviews were conducted with Maltese men who had undergone CABG. The recruited participants were all between the age of fifty-five and seventy-one and were recruited through purposive sampling.

Results: Five major themes were extrapolated from the participant's narratives during data analysis through IPA. Prevailing factors originated from the experience involve dealing with the knowledge of undergoing major heart surgery, attitudes towards the outcome of the procedure, perceived change of self, struggles with anxiety and depression and the

importance of spiritual and family support.

Conclusion: Findings show that each of the mentioned factors may not only influence patients' recovery from CABG, but may also impact a person's entire lifetime. Recommendations for future research proposed the implementation of a longitudinal study for better comprehension of the lasting impacts of CABG. Sustained psychological support throughout the CABG experience is also highly advised.

P.146

To evaluate the laparoscopic management of ovarian dermoid cysts

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Introduction: Dermoid cysts are the commonest germ cell tumors of the ovary known as benign mature teratomas. Transvaginal sonographic diagnosis of ovarian dermoid cysts together with laparoscopic approach are beneficial in diagnosing and treating these benign lesions. Most of dermoid cysts occur without significant clinical symptoms and they are often discovered incidentally during pelvic examination or routine ultrasound.

Methods: The histological findings of women who underwent laparoscopic ovarian cystectomies between January 2014 and July 2015 were retrospectively reviewed.

Results: All ovarian dermoid cystectomies were carried out laparoscopically. They constitute 6 of 38 (16%) laparoscopic cystectomies. Other histopathological findings included ovarian fibroma, serous cystadenoma, developmental cyst, paratubal cyst, borderline and haemorrhagic cyst. Dermoid cysts were present in women aged between 16 and 46 years. The mean patient's age was found to be 35 years. All of the cases were unilateral. On histology, dermoids were found to contain hairs and soft yellow material, keratinising stratified squamous epithelium with skin appendageal structures within the wall as well as adipose tissue, smooth muscle cells, thyroid gland, calcification and bone.

Conclusion: The laparoscopic approach provides a treatment option with smaller incisions, shorter hospital stay and recovery period as well as provides the least chance of adhesions which aims to preserve future fertility. Spillage of cyst contents is one of the main risks of laparoscopic ovarian cystectomies which can lead to chemical peritonitis. Risk can be minimised by aspirating the cyst after placing it intact within the endo bag during laparoscopy.

P.147

End-stage achalasia of the cardia – oesophagectomy is a viable though radical option

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Introduction: Case report with striking cross-sectional and operative images.

Methods: We present the case of a 64-year old gentleman with neglected achalasia of the cardia of 44 years duration, complaining of post-prandial retrosternal fullness and pain associated with belching, halitosis and progressive regurgitation of undigested food and fluid. He was referred in 2013 and endoscopy confirmed gross mega-oesophagus, a tight and unyielding lower oesophageal sphincter but no obvious tumour. PET-CT confirmed the absence of avid lesions and indicated that the megaesophagus was replacing most of the right hemithorax. Co-incidentally, the patient had become cachectic and was newly diagnosed with crippling rheumatoid arthritis. He was admitted for intravenous anti-inflammatory treatment and concurrently fed via a surgical jejunostomy for a period

of three months. Subsequently he underwent an uneventful 3-stage McKeown oesophagectomy with gastric pull-up and cervical hand-sewn anastomosis.

Results: The patient was discharged on the 10th post-operative day tolerating an almost normal diet. Over a period of 3 months he required 3 anastomotic endoscopic balloon dilations, at six months the jejunostomy tube was removed through a mini-laparotomy. He remains well and asymptomatic 2 years post-operatively.

Conclusion: In an era where minimal access cardiomyopathy and POEM have become the mainstay of treatment for achalasia, oesophagectomy remains a radical but effective option for neglected end-stage disease in the fit and well nourished patient.

Comparison of medical record keeping between Mater Dei Hospital and Karin Grech Hospital
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Introduction: Medical record keeping is a daily practice amongst doctors. The idea of this audit is to identify any differences and similarities between medical record keeping in an acute medical setting at Mater Dei Hospital (MDH) and rehabilitation centre at Karin Grech Hospital (KGH).

Methods: Two different audits about medical record keeping at MDH and KGH were compared so as to identify any possible similarities and differences in the results obtained. Student t-test is used to identify for any differences between medical recording keeping at MDH and KGH.

Results: Despite some similarities such as the rate of documentation about CPR statuses which is low in both hospitals (unfortunately); there are some differences. Whereas at KGH most of the old notes are available; not so may be said for the acute hospital where only about 69% of old notes are available. 28% of entries at KGH do not have a named most senior member versus 7.1% of those at MDH. Also entries at MDH are appropriately labelled in most cases (75.5%) whereas 63% of entries at KGH had a missing item (identity number, patient's name or surname). There were significant differences according to the statistical tools.

Conclusion: Medical record keeping is of utmost importance nowadays more than in previous years because of the increasing medicolegal issues. This comparison has shown that medical record keeping is somewhat more up to date in the acute hospital than at KGH. In both cases, more importance is to be given for good record keeping especially amongst the younger doctors.

P.149

The homemade laparoscopic trainer - is it a viable alternative to costly simulators?

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Introduction: Laparoscopic trainers have been proved to be effective to improve skills of laparoscopic surgery; they are usually installed at hospital in the surgical department with limited access hours, usually inconvenient to the schedule of the resident. Simple trainer boxes are necessary for residents who desire developing their skills at home independently to the venue and hours of surgical departments. Our goal is to bring the laparoscopic trainer to the desktop of the surgical resident by making it very cheap, small, light, secure and easy to construct.

Methods: A 6 litre plastic box, neoprene rubber, disposable laparoscopic instruments, an HD webcam and silk sutures were used to create a simulator for under 60 Euros. A questionnaire was devised to assess its reception amongst surgical trainees. Core trainees were taught a set of 6 skills on the trainer box before carrying out the same skills on a formal simulator.

Results: 80% of students were able to use the trainer box effectively. 75% showed improved capability when performing skills on a simulator after being trained on the box for three weeks.

Conclusion: We believe that the handmade laparoscopic trainer box is a cheap and viable alternative to practice essential laparoscopic surgical skills.

P.150

Laparoscopic hysterectomy for endometrial carcinoma

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Introduction: Endometrial carcinoma is the third most common malignancy in Maltese women. It is usually treated by total hysterectomy and bilateral salpingo-oophorectomy. According to NICE guidance, there is adequate evidence on the safety and efficacy of laparoscopic hysterectomy to support its use for endometrial carcinoma. Aim: Review of patients undergoing laparoscopic approach or the conventional open laparotomy as the surgical management for endometrial carcinoma.

Methods: Patients who had laparoscopic or open hysterectomy and bilateral salpingo-oophorectomy as treatment for endometrial carcinoma between January 2013 and July 2015 were included.

Results: Fourteen patients had surgical management for endometrial carcinoma between January 2013 and July 2015, age ranged between 54 and 83years. Nine patients (age range 57-83years) underwent open surgery, for endometrial adenocarcinoma Figo IA (two patients), IB (six patients) and IIIA (one patient). Laparoscopic hysterectomy and bilateral salpingo-oophorectomy was carried out in five patients (age ranges 54-75years) for endometrial carcinoma Figo IA (three patients), Ib (one patient) and Figo stageII (one patient). Only one of these was carried out in 2013 while four were carried out in 2014/2015. There were no conversion from laparoscopy to open. The patients in the laparoscopic group had shorter length of stay as compared to the laparotomy group. As regards complications, there were no patients in both groups that needed readmission.

Conclusion: Provided laparoscopic skills for this procedure are available and after patient selection, the laparoscopic approach for management of endometrial cancer provides an effective treatment option with smaller incisions and scars, and shorter recovery period.

Disclosure: none

P.151

Is multi-morbidity becoming normal?

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Introduction: Chronic conditions are known to be increasing with implications for their ongoing care ; to date there is little information available regarding patient conditions within the Maltese outpatient sector. We assessed referrals to Medical Consultant Clinics/Schedule V Clinics, aiming to classify the reasons for referral, the relevant systems and identify multi-morbidity, defined as two or more concurrent medical conditions in the same patient.

Methods: 100 consecutive Tickets of Referral (TOR) were prospectively analysed to identify the reasons for referral, the relevant system and whether multi-morbidity was present. All personal data were anonymised at source, with no possible backward linkage. Data were entered into an Excel ® sheet and analysed using a framework from the literature.

Results: N=100, men 45%, women 49%, 6% unclear from TOR. The clinical tasks identified from the 'Reasons for referral' included treatment (89%), review (23%), diagnosis (5%) and handover(1%).93% were cardiometabolic referrals,2% respiratory, 2% neurology, 3% unclear referrals (to Schedule V Clinic). 80% of referrals were hypertensive, 17% diabetic, and 23% dyslipidaemic. Multimorbidity was indicated in 41%.

Conclusion: Cardiovascular conditions accounted for the majority of referrals, who were referred mainly for

treatment and review, reflecting ongoing chronic disease management. Just over a third of referrals had information indicating multi-morbidity in their TOR-the real proportion is likely to be higher given that the patients were still due to be assessed. In view of the implications of multi-morbidity for individual risk and prognosis, healthcare utilisation and cost, this figure is of concern, and warrants further investigation.

P.152

The Malta BioBank / BBMRI.mt

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Introduction: The Malta BioBank is the BBMRI-ERIC's national node for Malta (BBMRI.mt) and forms part of the new inter-faculty Centre for Molecular Medicine and BioBanking at the University of Malta. It is a founding partner in EuroBioBank and RD-Connect. The Malta BioBank's management includes experts in: Ethics, Law and Sociology forming the ELSI working party; bioinformatics and Quality.

Methods: The clinical biobank links medical research conducted at the University of Malta with the Department of Health and Mater Dei Hospital's departments including Pathology, Paediatrics, Neurology and Oncology. The clinical catalogue holds a number of disease collections including: the Globin Bank; Parkinson's Disease (PD); Diabetes; Multiple Sclerosis; renal disorders; various cancers and rare diseases. The population biobank is being developed in the form of a research co-operative and includes a random collection of Maltese citizens and healthy Maltese senior citizens.

Results: The Globin Bank includes Beta and Alpha Thalassaemia and other haemoglobinopathies. The PD collection holds 200 cases and 400 age and gender matched controls and lifestyle questionnaires. The Diabetes Collection includes data and samples from newly-diagnosed Type 2 Diabetes Mellitus (T2DM) patients and Maltese and Libyan T2DM with advanced end-organ complications. Banked renal disorders include congenital nephrotic syndrome, CAKUT and Bartter's syndrome. Banked cancers include: familial breast, colon, lung and gastric cancer. Two new rare disease collections include mitochondrial disorders and s Medical and Life Science research would not be possible without well curated biobanks. udden cardiac deaths.

Conclusion: Medical and Life Science research would not be possible without well curated biobanks.

P.153

Where is the Wnt blowing? Wnt signalling and cancer

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Introduction: Nusse and Varmus first discovered Wnt in 1982. Since then, significant research has been done in this family of glycoproteins made of 19 different ligands. Wnt is an evolutionarily conserved signalling pathway which has a multitude of functions including in embryology and planar cell polarity. Its major pathways are Wnt/ β -catenin, called the canonical pathway as well as the non-canonical pathways Wnt/PCP and Wnt/Ca²⁺. These are subject to complex mechanistic control. In fact, research is still ongoing to discover more about interactions between themselves and other pathways and now there is an approach towards a more integrative view of Wnt signalling due cross-talk both between the Wnt pathways themselves as well as with other pathways such as Notch. It follows that Wnt dysregulation will have disastrous consequences. One disease commonly associated with defective Wnt signalling is cancer. These include colon, breast and liver cancer. A lot of research is being done both to elucidate which part of the pathway is responsible for the development of the

cancer and also into how to treat the cancer. In fact there have been several recent discoveries of possible potential future treatments which are still at an experimental phase.

Conclusion: There is still a lot of work to be done in order to understand better the complexities of Wnt signalling. However, the future looks bright for Wnt and cancers associated with a high mortality rate, may, become amenable to treatment.

P.154

An unusual presentation of gastric carcinoma

Maria Mifsud, Christabel Mizzi

Introduction: A fifty-four year old gentleman, known case of Hepatitis C and heavy smoker, was admitted to Medical Admissions Unit with a ten day history of dyspnoea on mild exertion, haemoptysis and increased sputum production. Chest radiograph showed bilateral pulmonary infiltrates and cardiomegaly. The shortness of breath did not settle with oxygen and administration of intravenous diuretics. In view of respiratory distress, Intensive Therapy Unit admission was necessary. A bedside echocardiogram was performed, which showed a large pericardial effusion with consequent cardiac tamponade. Pericardiocentesis was performed and haemorrhagic fluid was drained. After a period of monitoring, the patient's respiratory function improved and he was fit for transfer to a medical ward. Cytology of pericardial fluid showed numerous clusters of adenocarcinoma cells. Computed tomography of patient's trunk showed thickening of stomach curvature with enlarged perigastric and mediastinal lymph nodes. Diffuse reticular pulmonary infiltrates with moderate amount of bilateral pleural effusions were also seen on imaging suggestive of lymphangitis carcinomatosa. Based on these results a diagnosis of gastric adenocarcinoma was made. Patient was referred to oncologist for further management.

Conclusion: Gastric carcinoma presents insidiously with most of the cases having no specific symptoms whilst others having nonspecific gastrointestinal complaints such as dyspepsia. This unfortunately causes delay in diagnosis with most cases of gastric carcinoma presenting at an advanced stage. This case describes an unusual first presentation of gastric carcinoma presenting with a malignant pericardial effusion causing cardiac tamponade as a result of metastasis to the pericardium.

P.155

Pericarditis - clinical conundrum

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Introduction: Pericarditis is pericardial inflammation, which can be idiopathic or secondary. The general consensus is that pain is sharp, central, retrosternal and better on leaning forward but worse on inspiration and lying flat. However, older papers and books describe it as being worse on leaning forward. What is the bottom line?

Methods: *Discussion:* To answer this, we must look at the innervation of the pericardium. This in itself leads to a number of questions. Parietal pericardium is innervated via the phrenic nerve. However, while there are cases of pain referred to the shoulder, it does not explain the variation in intensity. Another question is why pain should be better on moving forward since theoretically when moving forward, the layers of pericardium rub together causing pain. Also, why is the pericardial friction rub heard more on leaning forward considering pain is reduced? Is it because the heart is closer to the chest wall thus making the rub louder? Is there a difference in pain depending on whether there is an effusion or not? This is because the fluid separates the layers on leaning forward, which may explain why pain is lessened. Finally, is it possible that there is innervation from intercostal

nerves, particularly in the cardiac notch which is the area not covered by pleura? We produce a hypothesis, which attempts to answer all this.

Conclusion: These questions are not easy to answer. However, they provide interesting and useful clinical insights, which may aid in the diagnosis of pericarditis.

P.156

A study on the management of corticosteroid side effects in cancer patients

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Introduction: Systemic corticosteroids lead to many adverse effects especially in cancer patients. Preventive measures and treatment options are essential to minimise side effects. The study aims to evaluate the prescribers' management of corticosteroid induced hyperglycaemia, dyspepsia, oral candidiasis and proximal myopathy. It is also aimed to discuss possible reasons for non adherence to guidelines and recommend interventions to reduce their risk of occurrence.

Methods: A retrospective review of the medical records for 156 consecutive patients was performed at the oncology outpatients and oncology wards of Boffa Hospital during the month of September 2014. Only patients who were on long term corticosteroids (>2 weeks duration) were considered. Patients younger than 12 years of age were excluded from the study. Any form of management to reduce corticosteroid side effects was compared to the guidelines published in the Allergy, Asthma and Clinical immunology journal*

Results: From 156 cancer patients, 55 patients satisfied the inclusion criteria. The mostly addressed side effect was Dyspepsia (n=35; 63.6%) followed by Proximal myopathy (n=27; 49%), Hyperglycaemia (n=24; 43.6%) and lastly Oral candidiasis (n=20; 36%). Adherence to guidelines was as follows:- *Hyperglycaemia-* Haemoglucose test (HGT) and Glycated Haemoglobin (HbA1c) monitoring (36%) *Dyspepsia-* Prescribing of omeprazole (51%) and ranitidine (5%) *Oral candidiasis-* oropharyngeal exam (29%) *Proximal myopathy-* quadriceps strengthening (40%)

Conclusion: Improvement is required with regards to the management of corticosteroid side effects. Possible Actions that may be taken include strategies to improve guideline awareness, the prescribing of the least effective dose, adequate patient education and the implementation of a steroid card.

P.157

Outpatient delivery of oncology treatments at Sir Paul Boffa Hospital - review of current practice

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Introduction: With the development of newer anti-cancer agents and supportive medications, more oncology treatments can be delivered in an outpatient setting. In Malta, outpatient treatments for adults with solid malignancies are delivered at the Oncology Day Ward (ODW), Sir Paul Boffa Hospital. The aim of this study was to review current practice of this service prior to the move to the new oncology centre.

Methods: All intravenous chemotherapy (CT) and targeted therapies (TT) delivered at the ODW in October and November 2014 were included in this review. Data regarding patient demographics, type of malignancy, treatment and intent, was collected from patient and pharmacy records.

Results: 268 different patients received CT at the ODW over two months, amounting to over 879 visits. 64% of patients were women; 61% were aged 51-70 years. Treatment for gastrointestinal malignancies accounted for 38% of visits,

followed by breast (26%), lung (13%), gynaecological (12%) and genitourinary cancers (6%). The most commonly administered chemotherapeutic agents were weekly 5-fluorouracil (23%) and gemcitabine (13%). 55 patients received TT over 142 visits. Administration of trastuzumab accounted for 90% of these visits, while bevacizumab accounted for 10%.

Conclusion: This review provides a valuable insight into current practice and acts as baseline for future audits. With increasing service demands, we need to explore ways of making treatment delivery more efficient in order to sustain growth. Oral and subcutaneous drug formulations will allow us to deliver the same treatments utilizing fewer resources.

P.158

Mechanism of sternotomy dehiscence

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Introduction: Biomechanical modelling of the forces acting on a median sternotomy can explain the mechanism of sternotomy dehiscence, leading to improved closure techniques.

Methods: Chest wall forces on 40 kPa coughing were measured using a novel finite element analysis (FEA) ellipsoid chest model, based on average measurements of eight adult male thoracic computerized tomography (CT) scans, with Pearson's correlation coefficient used to assess the anatomical accuracy. Another FEA model was constructed representing the barrel chest of chronic obstructive pulmonary disease (COPD) patients. Six, seven and eight trans-sternal and figure-of-eight closures were tested against both FEA models.

Results: Comparison between chest wall measurements from CT data and the normal ellipsoid FEA model showed an accurate fit ($P < 0.001$, correlation coefficients: coronal $r = 0.998$, sagittal $r = 0.991$). Coughing caused rotational moments of 92 Nm, pivoting at the suprasternal notch for the normal FEA model, rising to 118 Nm in the COPD model (t-test, $P < 0.001$). The threshold for dehiscence was 84 Nm with a six-sternal-wire closure, 107 Nm with seven wires, 127 Nm with eight wires and 71 Nm for three figure-of-eights.

Conclusion: The normal rib cage closely fits the ellipsoid FEA model. Lateral chest wall forces were significantly higher in the barrel-shaped chest. Rotational moments generated by forces acting on a six-sternal-wire closure at the suprasternal notch were sufficient to cause lateral distraction pivoting at the top of the manubrium. The six-sternal-wire closure may be enhanced by the addition of two extra wires.

P.159

Biological scaling in the heart : A study of sizing in physiological pressure vessels

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Introduction: Hollow organs, functioning as pressure vessels, obey Laplace's Law. The adherence of hollow organs to Laplace Law's predictions is a measure of mammalian internal organs' efficiency in functioning with economic regulation.

Methods: The laws governing pressure vessels can be applied to hollow organs in the body that are subject to distending pressures, in order to assess the relationship between the mass of the pressure vessel and its surface area, its volume

of content, the mass of the body and its pressurization energy, and by the principle of conservation of energy, between mass of the heart and cardiac output, and between wall thickness and radius. A literature search, identifying heart and lung data across different mammalian and bird species, was used to generate allometric relationships to assess the validity of these observations.

Results: Near isometry exists between mass of body and mass of pressure vessel and between pressure vessels and their contents e.g. mass of heart and end-diastolic volume and mass of lung and lung volume. Isometry has been demonstrated between heart mass and cardiac output in small animals.

Conclusion: Mammalian hearts have reached the physical limit of Laplace's Law indicating a high degree of efficiency in pressure vessel mechanics. The heart operates at the minimum mass necessary to maintain structural integrity, demonstrating a high degree of symmorphosis. Cardiac output decreases in larger animals due to a relatively negative aortic cross-section allometry, matched to the basal metabolic rate, which may lead to turbulence within the aorta on exercise.

P.160

e-Referral system in oncology

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Introduction: For years, referrals to the Oncology Department involved writing a referral or consultation note, and then sending it by hand or faxing it. This often caused delays and paper trail proved difficult to track. In early 2014, a government email address was created and a memo sent to all health departments introducing this electronic referral system. The aim of this audit was to assess the implementation of this new system, assess any concerns and create a template for future referrals

Methods: All referrals received at the oncology department between May 26th 2014 and June 9th 2014 were identified and reviewed. Information on patient demographics, medical carer details, past medical history, current plans, diagnosis and staging was noted.

Results: 54 referrals were sent in total to the Oncology Department during the two week period. 52 referrals were electronic. Information on patient demographics was complete in 59% of referrals; medical carer details were present in 62%. 20% of referrals included information on medical history and treatment plans; diagnosis and staging was present in 44% of referrals.

Conclusion: There was an excellent uptake of the e-referral system. However, important information was missing from several referrals and this could result in delays to the process. A template has been designed to streamline future referrals and facilitate the process.

P.161

An update of acute oncology guidelines

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Introduction: Oncology is a complex area requiring specialist knowledge in cancer therapeutics. In the onset of unexpected complications, the cancer patient is likely to present to our general hospital for immediate management. For the casualty physician, appropriate support is needed to improve patient outcomes in the acute setting. To determine whether this was the case, a question based survey was carried out amongst trainees in the Department of Medicine and Casualty. The conclusion was a lacunae in the acute oncology service, in terms of clinical practice guidelines. Subsequently the following guiding documents were designed; hypercalcaemia of malignancy, superior vena caval (SVC) obstruction and malignant spinal cord compression (MSCC). A clinical

practice guideline was already in place for febrile neutropenia. All three emergencies listed are potentially treatable, if this is immediate, appropriate and sequential. These guidelines are intended to assist on the initial assessment, investigation and streamline management of patients. They are however not intended as a substitute for specialist oncology input but to disseminate a framework for homogenous and evidence based clinical practice for the clinicians concerned.

Conclusion: Adoption of these guidelines will allow widespread implementation of up to date and evidence based oncology protocols, assist in the provision of consistently high standard of care in the local setting and improve patient outcomes and survival.

P.162

Determinants of road courtesy in Malta: a prerogative of gender, age and car size

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Introduction: Courtesy on busy Maltese roads is not always evident but is it dependent on or influenced by, for example, driver and car characteristics?

Methods: Courtesy was defined when a driver with the right of way 'allowed access' to another, 'secondary' car onto a main road leading to a congested roundabout, whereby 'courteous passage' was the only reasonable means of access. The same car (class2, 17.5yrs in poor condition), with one driver (SAM, 50+) and passenger (EAM, 17yrs), approaching the same junction at 0730hrs±15min on school days was used as the secondary car. Details of all cars that refused or allowed access, their drivers' gender and age (to nearest 10yrs), accompanying passengers and weather were recorded by EAM onto a proforma, standardised after a weeks' pilot trial. Cars were grouped according to the British Vehicle Classification.

Results: Records from 88 schooldays over 6 months resulted in 141 refusals plus 44 courteous passes (analysed), and 46 access events through gaps in traffic or via known acquaintances (not analysed). Gender, age, weather and passengers had no bearing on road courtesy, if analysed independently. Courtesy was significantly enhanced with family saloons (Gp4-6) when compared with small cars (Gp1-3, $p=0.04$), and luxury or work vehicles (Gp7-11, $p=0.009$), especially in those with male drivers ($p=0.01$) aged 40+ ($p=0.04$). Drivers of large and work vehicles, mostly male (92%), were significantly less courteous, $p=0.04$.

Conclusion: Males over 40 years driving family saloons were the most courteous, whilst luxury cars, trucks, buses and vans were the least likely to afford courteous access.

P.163

How much anatomy do medical students remember?

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Introduction: Pure anatomy teaching at the University of Malta is completed by the second year, and is not formally revisited later. This study aimed to determine the extent of anatomical knowledge retention in each year of medical school.

Methods: Participating students, recruited from the first to the final year of medical school, submitted voluntarily to a best of four multiple-choice test, consisting of 99 clinical and non-clinical anatomy questions spanning all principal body regions, under examination conditions.

Results: 239 students enrolled in the study. Overall, second year students scored lowest (56.6%), with progressive improvement noted with clinical exposure in the third (63.0%) and fourth (64.2%) years; $p=0.0264$. Knowledge of thoracic

anatomy improved in the clinical years ($p < 0.0001$), limb anatomy improved in the clinical years following an initial decline after first year (upper: $p = 0.0166$; lower: $p = 0.0022$), gastrointestinal ($p = 0.1155$) and neuroanatomical ($p = 0.5818$) knowledge levels were largely unchanged, whilst knowledge of renal and reproductive anatomy declined between first and second year students, before plateauing ($p = 0.0110$).

Conclusion: Our results largely support the traditional teaching method currently employed. This whilst raising questions on the clinical relevance of content taught in various body regions, and supporting the relevance of an all-encompassing final anatomical exam at the end of the preclinical years.

P.164

The grey area: self-evaluation of performance in medical students at the University of Malta

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Introduction: Precise self-evaluation and a keen insight into one's performance and limitations are essential in medical practice. We sought to assess the accuracy of medical students' assessment of their own performance in a written clinical anatomy test.

Methods: Participating students, recruited from the first to the penultimate year of medical school, submitted voluntarily to a best-of-four multiple-choice test, consisting of 99 clinical and non-clinical anatomy questions spanning all principal body regions, under examination conditions. They were then asked to estimate their score. Unpaired t test and ANOVA were used for initial statistical analysis.

Results: 189 students, 89 (47.1%) male, participated in the study. 139 (73.5%) were Maltese nationals, whilst 34 (17.9%) and 16 (8.4%) were European and other international students, respectively. Overall, students underestimated their true performance by $16.2 \pm 15.2\%$ (mean \pm SD), with no improvement in accuracy of self-evaluation noted along the course of study ($p = 0.7560$). Female students tended to underrate more than their male counterparts ($19.1 \pm 13.9\%$ vs $12.8 \pm 16.0\%$, $p = 0.0048$), despite no difference in actual score ($p = 0.1527$). Non-Maltese European students estimated the furthest below their actual score ($22.9 \pm 9.5\%$), with Maltese ($15.7 \pm 15.8\%$) and other international ($5.3 \pm 12.8\%$) students showing more insight ($p=0.0005$).

Conclusion: Students failed to correctly evaluate their performance in a simple written anatomy test. It needs to be determined whether this lack of insight also extends to practical examinations as well as clinical skills. This may demonstrate the need for targeted non-technical skills training in medical school and beyond.

P.165

A model study investigating the minimization of deflation in cadaveric bulbi oculi via the identification and treatment of major anatomical leakage sources

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Introduction: Owing to the cessation of physiological processes upon death and ineffective preservation techniques, cadaveric bulbi oculi become deflated. As a result, ophthalmic surgery tuition centers are resorting to the use of fresh animal eyes to aid students in mastering ocular surgical techniques. The objectives of this study are to classify anatomical sites of major fluid leakage in cadaveric bulbi oculi and identify ways of minimizing them.

Methods: A total of 3 ml of coloured isotonic saline was injected into the vitreous humour of four bovine eyes. The major leakage sites were marked and cauterized using a soldering iron. Saline was re-injected to re-assess leakage sources.

Results: During the first test, in which the ocular muscles were removed, leakage occurred from the posterior aspect close to the initial injection site, optic nerve and ophthalmic vessels. Minimal leakage from the posterior scleral veins was noted. No leakage from the anterior aspect of the eyeball was observed. Deflation was visible 60 minutes post-injection. During the second test, in which the ocular muscles were intact, leakage was much less compared to the previous test. The most visible leakages were attributable to the area around the injection site, however the area around the optic nerve has shown minimal leakage over the same time period. The bulbi oculi remained significantly inflated for 90 minutes. No visible leakages were observed after cautery.

Conclusion: The investigation of fluid injection and cautery of all leakage sources has shown a favourable outcome in devising an optimal preservation technique for the cadaveric eye.

P.166

A case of internal carotid artery thrombosis associated with thalidomide administration in multiple myeloma

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Introduction: The use of thalidomide in multiple myeloma (MM) in combination with other chemotherapeutic agents at induction has led to remarkable rates of remission. However, thalidomide is known to cause teratogenicity, neuropathy, venous thromboembolism, and rarely arterial thrombosis. We report the case of a 45 year old lady who was diagnosed with MM after presenting with anaemia and thrombocytopenia. Serum protein electrophoresis and immunofixation demonstrated hypogammaglobulinaemia and an IgG lambda monoclonal band. Her serum free light chain k/l ratio was abnormal at 0.001 (N: 0.26-1.65). A bone marrow trephine biopsy revealed a nodular infiltrate of plasma cells. She was started on thalidomide, cyclophosphamide and dexamethasone with lower molecular weight heparin as prophylaxis for thromboembolism. A week later, she developed sudden right hemiparesis, right facial paralysis and expressive aphasia. Ultrasound doppler revealed left internal carotid artery occlusion, and magnetic resonance imaging confirmed left cerebral hemisphere infarction. She had no cardiovascular risk factors while her vasculitic and thrombophilia work-up were unremarkable. She was prescribed an antiplatelet and started on a rehabilitation programme. Thalidomide and cyclophosphamide were switched to bortezomib and dexamethasone.

Conclusion: While venous thrombosis as a complication of thalidomide therapy has often been described, arterial thrombosis is rare. The prothrombotic state in MM and

the properties of thalidomide predispose patients to both arterial and venous thrombotic events. Our index patient succumbed to the former despite the absence of other risk factors. It is yet unknown as to why this complication occurs despite the administration of anticoagulant prophylaxis.

P.167

5-Fluorouracil-induced acute cerebellar syndrome: a case report

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Introduction: A 74-year old gentleman presented to the Emergency Department with sudden onset of constipation and distension. On computed tomography (CT), he was found to have a tumour in the descending colon with liver metastases. A left hemicolectomy was carried out and histology revealed moderately differentiated tubular adenocarcinoma. Despite 43 cycles of 5-fluorouracil (5-FU) and a further 24 cycles of 5-fluorouracil and folinic acid (5-FU/FA), carcinoembryonic antigen (CEA) levels still kept increasing, indicating progressive disease. Therefore, palliative folinic acid, 5-FU and oxaliplatin (FOLFOX regimen) was started. After the tenth cycle of FOLFOX, the patient presented with a one-week history of unsteady gait and dysarthria. On examination, Romberg's and heel-to-shin tests were positive. Dysdiadochokinesia and past-pointing were more pronounced on the left than on the right. A wide-based unsteady gait and slurred speech were noted. CT brain showed no new metastatic changes. FOLFOX chemotherapy was stopped and the patient was referred to the neurology outpatients' clinic. Antibodies against the IgG anti-neuronal nuclear autoantibody ANNA-2 (anti-Ri), Purkinje cells (anti-Yo) and Hu proteins (anti-Hu) were negative and physiotherapy was started.

Conclusion: The patient was reviewed after four weeks of regular physiotherapy sessions. He was walking steadily and his speech was normal. An improvement in coordination was also noted. Chemotherapy was withheld and the patient continued to be followed up by the neurologists. This case highlights the importance of careful assessment of all patients on chemotherapy in order to identify complications as early as possible.

P.168

The background to teaching anatomy from first year medical students' perspective: a review of the approach taken and an analysis of the results

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Introduction: Peer-education is an alternative teaching technique that utilizes students' perspective to facilitate the delivery of information to their fellow peers. The exam performance of medical students being taught anatomy through conventional methods was compared to that of peer-teaching to consider its efficacy.

Methods: After obtaining the required knowledge, students substituted the professor in lecturing their cohort using cadaveric specimens. The peer-teachers delivered a video-aided lecture indicating structures of the specimens in vivo, in an approach that, based on the peer-teachers' experience, facilitated student comprehension. This was followed by small group sessions to aid the students with difficulties and reinforce the material through individual testing. Practical exam results of the peer-educated semester were collected and compared to those obtained under traditional lecturing techniques.

Results: Results obtained in the second semester of 2011/12 were significantly lower than those of the first semester (8.26%, $P < 0.001$). The difference in results achieved in 2012/2013 were also lower than the first semester (1.46%, $P > 0.05$), however the decline was found to be insignificant. In contrast,

during the year of peer-education (2013/14), students' exam performance improved significantly by 2.60% ($P < 0.05$) in the second semester when compared to first semester. Therefore results show that the students who underwent peer-teaching performed better in examinations than those who were taught through conventional teaching techniques.

Conclusion: Although many factors need to be taken into account when comparing teaching techniques, the introduction of peer-teaching coinciding with improved student performance is a finding that should not be overlooked.

The use of immunotherapy for the treatment of canine cancers following surgery

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Introduction: With approval from the Animal Welfare Council, this research aims to create vaccines directed at specific tumours using dogs' own tumour antigens, which are retrieved in the laboratory from the excised tumour. The hypothesis is that when these vaccines are administered in conjunction with another vaccine (the 7-in-1), they encourage the dogs' own immune system to mount an immune response against the tumour antigens given in the vaccine, and thus against the tumour itself.

Methods: The primary tumour is removed surgically and tumour tissue is taken from it as the source of tumour antigens. The tumour tissue is exposed to both microwaves and enzymatic digestion for antigen retrieval in the laboratory, and filtration sterilization is used to obtain the final vaccine. The vaccine is then administered to the dog with informed consent from the owner, and the dog is monitored for signs of progression of disease or recurrence.

Results: Results so far have not shown any serious side effects, and no recurrence of tumours has been reported as the dogs continue to be followed.

Conclusion: This study may provide in future, a relatively safe option for fighting tumours using a specific, personalized and relatively economical method to control tumour spread and recurrence.

Disclosure: This research is carried out with approval from the Animal Welfare Council.

P.170

Are medical students getting better at passing examinations in the basic medical sciences?

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Introduction: The aim of this study was to investigate the examination success rate of local and international students in the biomedical sciences.

Methods: The anonymized actual exam results of each study unit in the first and second years were obtained from SIMS for four academic years from 2010/11 to 2013/14. The average marks and number of failures per study unit were analysed by nationality.

Results: The average mark for all students in all study units between 2010/11 and 2013/14 was 61.6% (SD 8.1), with no significant difference between Years 1 and 2 over the study period. The average mark in the practical exam which covers only anatomy was significantly higher at 68.9% (SD 8.7). The average Year 2 practical mark was almost 6% lower than that of Year 1 reflecting the greater difficulty of the examinations. Students fared best in the respiratory and renal systems, and worst in head and neck and neuroanatomy. The proportion of students failing any exam halved between Year 1 and Year 2, reflecting the maturity of students. Local students fared significantly better than international students in most subjects as the mean number of local students failing any exam in any year was 16 versus 66 for international students.

Conclusion: The ability of medical students to successfully pass biomedical sciences examinations did not change significantly between 2010/11 and 2013/14. However, international students fared significantly worse, suggesting that language, cultural adjustment and psycho-social issues still need to be addressed.

P.171

Attitude of Medical Students Towards Game-Based Learning of Anatomy

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Introduction: Game-based learning has come to prominence as new tools are now available to aid students learn and memorise concepts for a variety of subjects. Games are known to add fun to the process of learning while promoting understanding and retention of the subject. The purpose of this study is to survey attitudes of medical students towards gamifying the learning and recall of anatomy.

Methods: An anonymous questionnaire was circulated online to all Year 1 medical students at the University of Malta in 2014/15.

Results: 35 students responded (18%), of whom 25 (71.4%) were female, and 25 (85.7%) were local. Just over half (52.4%) had ever used games while studying anatomy, but in the majority of cases, the games were simple flash cards (81.2%). Among the majority of respondents (83.3%) who agreed that games are beneficial to student learning, 76% preferred quiz style games to help them in their studies. The vast majority of Year 1 medical students surveyed felt that games could be useful for testing existing knowledge (97.6%) as well as for teaching new concepts (88.1%).

Conclusion: Anatomy is a visual science, which encourages the use of game-based learning. The use of serious games for learning and recall of anatomy is perceived as valuable by medical students at the University of Malta. Our next step is the local development and testing of a game to provide an effective learning solution in the context of the current educational environment.

P.172

Learning anatomy through "Peer Teaching" in medical school: a literature review

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Introduction: Medical schools in the twenty first century, have undergone drastic changes in their teaching methodologies worldwide, more specifically in the teaching of anatomy. The main goal of any educational institution is the transfer of knowledge from educator to student in an effective manner. This review attempts to bring together the different teaching methodologies used in medical schools in this new era. Medical institutions have a wide variety of different approaches in teaching anatomy. Tradition dictates that cadaveric dissection and prosected specimens are the gold standard in providing medical students a solid foundation upon which they can build their knowledge and understanding. However, some medical schools use other educational tools, such as anatomical models, computer programs and medical imaging. Moreover, the recent introduction of non-conventional teaching techniques such as problem based learning, encourage cognitive thinking, teamwork and professionalism. Peer teaching is an innovative way of education, and its success is thought to lie in cognitive congruence; having shared learning experiences and capabilities, cognitive congruence allows students to ask questions in confidence and make any clarifications, without fear of being judged. Other advantages include, enhanced teamwork and communication skills, for both the peer teacher and the students being taught.

Conclusion: When viewing the whole spectrum of teaching tools and learning techniques, there are none that appear to be more superior to others, but rather that they should be used in conjunction with one another, in order to enhance learning.

P.173

The GoPro® Action Camera in the Operating Theatre - A New Method of Teaching Medical Students

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Introduction: The GoPro® Hero device is an action camera used for recording high definition footage of extreme sports, underwater photography and slow motion videos. We used a head-strapped model to record 10 operations in high resolution for the purpose of teaching medical students.

Methods: A GoPro® camera with a head-strap and bayonet mount was used in theatre. Wireless connection allowed the operation to be followed in real-time on student smartphones and tablet-devices. A dedicated software application allowed students to slow down periods of the operation to 240 frames per second, allowing for precise understanding of each operative step.

Results: 10 operations were recorded. 90% of students reported full understanding of each operative step. 75% reported improved learning based on the slow motion function of this camera. 90% confirmed enhanced visualisation of the operation when compared to traditional teaching methods ('looking over the surgeon's shoulder'). 100% would recommend employing this method for future teaching classes.

Conclusion: An anonymised questionnaire yielded positive results from attending students, suggesting that this equipment may become a popular intra-operative teaching device.

P.174

A theoretical understanding of the Postgraduate Hospital Educational Environment Measure questionnaire

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Introduction: Human environments can be theoretically conceptualised as constituting dimensions grouped into three broad domains: goal orientation, relationships and organization/regulation. The clinical learning environment (CLE) is a complex interaction of physical, social and relational factors that is a major determinant of the quality of education and clinical care. Its evaluation is primarily through measurement of 'climate', the perceptions of those exposed to the environment. The Postgraduate Hospital Educational Environment Measure questionnaire (PHEEM) is a 40-item questionnaire commonly used to measure the CLE. Factor analysis allows identification of underlying constructs. As such, it may support a theoretical basis for the PHEEM

Methods: The PHEEM was administered to 73 trainees (response rate 65.2%). Analyses was by primary component analysis (PCA) with orthogonal rotation (varimax) using Hatcher's interpretability criteria. Kaiser Meyer Olkin Measure of Sampling Adequacy was 0.749, showing adequate characteristics for analysis.

Results: The final 5 factor model retained 27 variables. Factor 1 accounted for most of the model variance (37.67%). This included primarily variables relating to the quality of teachers and teaching/training. Factor 2 related to training environment, Factor 3 to training support, Factor 4 to organization of the work environment and Factor 5 to the environmental culture.

Conclusion: This study is limited by its small sample size but psychometric properties were adequate to allow analyses. The PHEEM measured primarily teaching/training and teacher qualities but also identifies other factors relating to the affective aspects of the environment and its' organization. Thus, the PHEEM reflects theoretical conceptualisation of human environments.

P.175

A survey of the climate of professionalism in one institution

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Introduction: Professionalism represents the set of values, attributes and behaviours that is the basis of trust between the profession and society. Measurement of the demonstrations of behaviours that reflect these concepts are important because they allow for a measure of the learning environment. The UMKC-SOM climate of Professionalism instrument (UMKC-SOM) gives a measure of the perception of the frequency of professional behaviour and of the teaching of professionalism. This incorporates 46 Likert items (scored 1-4) subdivided into 2 subscales, 'Professionalism Behaviour' (PB) and 'Teaching of Professionalism' (ToP). The scale assumes that items are summative.

Methods: The UMKC-SOM was used to measure the climate of professionalism in one institution. The UMKC-SOM was completed by 37 trainers (response rate 35.2%) and 64 trainees (response rate 53%).

Results: The combined (trainee and trainer) overall (PB and ToP) score was 139.25 (95% CL 135.92-142.59) (75% of total possible score). There was no difference between trainees and trainers. The combined PB score was 110.57 (95% CL 108.20-112.94) (76.8%) with no difference between trainees and trainers. The combined ToP score was 29.87 (95% CL 28.35-31.38) (74.7%). However, trainers (32.36 {95% CI 29.97-34.74}) rated themselves higher for ToP than did trainees (28.46 {95% CI 26.55-30.36}) ($p = 0.013$). Differences for some individual item scores for PB existed between trainers and trainees, indicating differences in the perceptions of each other's behaviours.

Conclusion: This study suggests a reasonable measure of the climate of professionalism in one institution. However, trainers may not model or teach professionalism as well as they think they do.

P.176

Outbreak of invasive group A Streptococcus in a nursing home, Malta, June 2015

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Introduction: In June 2015 we were notified of a fatal case of invasive Group A Streptococcus (iGAS) in an elderly patient who had been admitted to MDH from a nursing home. Upon further investigation, it was found that another resident from the same nursing home had died in May 2015 due to iGAS infection. The cases resided in adjacent rooms in the home but did not interact with each other. We launched an outbreak investigation to identify the source of infection and prevent further cases.

Methods: Urgent meetings were held with the nursing home staff and the following measures were implemented: Strict hand hygiene policy amongst staff/visitors; Terminal cleaning with bleach of the affected ward; Throat swabs of staff involved in wound care management, of staff assigned to the affected ward and residents sharing same room with the cases; Swabbing of any staff/residents with symptoms of GAS infection including sore throat and skin infection/wounds; Monitoring of staff/residents for symptoms of GAS infection.

Results: A total of 22 staff members and 9 residents were swabbed during the 1 month of enhanced surveillance. None were positive for GAS.

Conclusion: This outbreak highlights the importance of increased awareness of GAS infections amongst healthcare staff and of strict hygiene protocols to prevent person-to-person transmission. This is especially important where immunocompromised and elderly patients are involved owing

to the high mortality rate. Guidelines are currently being drafted with an aim to improve notification, management and treatment of iGAS cases and their close contacts.

P.177

“Shielded from death”: The lived experience of Maltese men who have an implantable cardioverter defibrillator

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Introduction: An implantable cardioverter defibrillator (ICD) is an effective way to prevent sudden cardiac death in patients who are at high risk of suffering from ventricular arrhythmias (abnormal heart rhythms). However there is a lack of literature exploring patients' experiences with ICD both locally and on an international level. The aim of this study was therefore to explore the lived experiences of people who went through this procedure and are living with an ICD.

Methods: A qualitative approach was adopted to achieve the aim of the study. Five Maltese male participants with ICD were recruited through purposive sampling. Data was collected through audio recorded individual semi-structured interviews. Data was analysed using interpretative phenomenological analysis.

Results: From this analysis, five major themes emerged: 'To live or to die; Life before implantation', 'My new life'; Living with the ICD, 'Keep calm and carry on'; Coping with the ICD, 'Finding Support' and 'The experience of an Improved Quality of Life: Benefits of ICD?'

Conclusion: This study revealed how after ICD, participants reported an improvement in their quality of life. However, they described negative emotions that arose post-procedure along with the various coping mechanisms used which included optimism, spirituality and overall acceptance of the device. Moreover, psychosocial and medical support were deemed as crucial both before and after the procedure. Longitudinal psychosocial research, using parallel qualitative and quantitative methods, are necessary for a better understanding of the patient's experiences. Future psychosocial interventions in clinical practice are critical to ameliorate the lived-experience and quality of life.

P.178

Lung function in fuel station attendants: a comparative study

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Introduction: Volatile fuel compounds and roadway motor vehicle exhaust are the major sources of a hazardous environment for full time fuel station attendants. The aim of this study was to infer whether fuel station attendants manifest a further decrease in lung function when compared to other full-time workers working outdoors and whether smoking tobacco manifest a further decrease in lung function among attendants.

Methods: Lung function of 30 fuel station attendants (28.6 ± 6.24 years) was compared to 30 outdoor workers (27.53 ± 5.59 years) as control group via spirometry. Half of both exposed and control group consisted of participants who smoke tobacco. All participants were Caucasian males.

Results: Results showed a statistically significant decrease in FEV₁, FVC and FEV₁/FVC ratio in the exposed group when compared to the control (FEV₁ 78.84 ± 7.19% of predicted vs 87.97 ± 8.32% of predicted, p < 0.001; FVC 85.84 ± 7.00% of predicted vs 90.24 ± 9.41% of predicted, p = 0.02; FEV₁/FVC ratio (76.28 ± 4.72% vs 81.15 ± 4.31%, p < 0.001). Fuel station attendants who smoke showed a significant drop in lung function when compared to non smoking attendants (FEV₁ 75.38 ± 4.31% of predicted vs 81.74 ± 8.18% of predicted, p

0.006; FVC 89.93 ± 5.43 % of predicted vs 88.75 ± 7.34 % of predicted, p = 0.01).

Conclusion: More research is needed to further shed light on the exposure hazards that fuel stations attendants face.

P.179

Audit on head injury discharge advice in neuro-surgery

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Introduction: NICE guidelines on Head Injury state that patients with any degree of head injury are to be given verbal and printed discharge advice. This includes:

- Details of nature and severity of injury
- Contact details relevant medical services
- Risk factors alerting patient to return to A&E
- Details about recovery process
- Information about return to everyday activities

Methods: We audited the discharge advice present in all the discharge letters (case summaries) of the patients admitted under Neuro-Surgical care with a head injury in 2014. Our study contained 99 patients and apart from individual risk factors, details about the recovery process and information about return to daily activities, we also took into consideration the patients' gender, ITU admission and the cause of the injury. The NICE clinical guideline 176 was used as the standard for the discharge advice typed.

Results: Any mention of head injury advice was only present in ten (17%) discharge letters with mention of individual risk factors even lower (eg. headaches, vomiting <10%; amnesia 0%). Details of the recovery process were more infrequent (2%).

Conclusion: Improvement in printed head injury advice is needed. A readily available pre-set template on the Electronic Case Summary software that includes all the advice audited is suggested. Thus, at just the click of a button, all the necessary discharge advice will be available in a printed format to be given to the patient on discharge. Detailed guidelines on head injury discharge advice is lacking locally and this audit aims to fill this current locum.

P.180

Use of online forms for patient data sheet inputting in Maltese health centres

A quality improvement project

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Introduction: Information technology is essential in administrative and clinical data management. Patient demographic details and reason for encounter are currently inputted by health centre doctors in a handwritten format

Methods: The aim of this pilot project was to analyse the feasibility of switching from a handwritten to an online electronic system which includes additional data fields related to the presenting encounter including International Classification of Primary Care (ICPC) coding. Data of patients walking in health centres were anonymously recorded by 3 doctors working 48 hours a week at the 3 main (Mosta, Floriana, Paola) health centres between the 13th of October and the 11th of January.

Results: An online input sheet was designed via Google® Sheets® whereby timestamp and username were automatically generated on inputting data. The sheet also notified the user if important data such as whether the case was urgent, referred or a police case. A total of 1063 records were inputted and viewed in a database generated by the programme. The project showed that the

system ensured a fast alternative offering legibility, thorough inputting and automatic statistical analysis.

Conclusion: A similar system in health centres will assist in auditing current practice and resource management according to changing needs and demand.

P.181

The experience of general practitioners with elderly patients with osteoarthritis *Doriella Galea*

Introduction: Osteoarthritis is a degenerative condition commonly effecting elderly patients in the community. There is a “demographic transition” leading to an aging population. The aim of the study is to perform a qualitative assessment about how general practitioners (GPs) look at osteoarthritis, its effects on patients’ lives as regards to the biopsychosocial model. The aim is to analyse the GPs’ perspectives about the local available sources and any possible improvements.

Methods: Interpretative phenomenological analysis (IPA) was used as it allows to discover the details of each individual GP. Two GPs who have been practising for more than 5 years within the community where selected on a first come basis. Snow balling was used to recruit two others. Semi-structured interviews were then conducted transcribed and analysed.

Results: There was a common feeling that dealing with such a common disease is challenging within the community and there is a need for a specialised osteoarthritis clinic in the community to cater for all these patients’ needs via a multidisciplinary team. The need for a holistic approach was agreed amongst all the participants.

Conclusion: Osteoarthritis is a common, challenging condition which is treated by GPs. Being multi-faceted; input from other professionals is required ideally in specialised clinics.

Disclosure: Masters supported by Master IT

P.182

Twin-twin transfusion syndrome - a case study

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Introduction: Twin-Twin Transfusion Syndrome (TTTS) can occur in 8-10% of twin pregnancies with a monochorionic, diamniotic (MCDA) placenta. We present a case of Twin-Twin Transfusion Syndrome, followed by Chorioamnionitis.

Methods: Through sonographic evaluation early on in the pregnancy, nuchal thickening was noticed in one of the twins. The mother was closely monitored thereafter and at 16 weeks, TTTS was diagnosed. She was thus sent to the UK for fetoscopic laser photocoagulation of the placental anastomoses, and the growth of the twins stabilized. At 28 weeks, however, she was re-admitted with fever and spontaneous rupture of membranes, in which the liquor had a greenish colouration. Cardiotocography showed foetal distress and the patient underwent emergency Caesarian Section under general anaesthesia.

Conclusion: The twins were delivered with very poor oxygenation potential but despite this, one of them survived.

P.183

An unusual case of middle aortic syndrome *Stephen Micallef Eynaud*

Mater Dei Hospital

Introduction: Middle aortic syndrome is a rare disease with only two hundred cases reported in the literature. It is also known as coarctation of the abdominal aorta or abdominal aortic hypoplasia. It may present clinically as uncontrolled hypertension, lower limb claudication or abdominal claudication. Surgical treatment is known to offer effective symptomatic relief and improves life expectancy.

Methods: Keywords: Middle-aortic syndrome, Abdominal

aortic coarctation, Hypertension, Lower limb claudication, Aorto-aortic bypass were used in a PubMed-generated review of the literature.

Results: Two hundred other cases pertinent to our study were generated.

Conclusion: Mid aortic syndrome or Middle aortic syndrome (MAS) is a rare condition that may be congenital or acquired affecting the abdominal aorta in children and young adults. It is characterised by a narrowing of the distal thoracic and/or abdominal aorta and its branches. It is also referred to as ‘Abdominal aortic coarctation’. We present a case of mid-aortic syndrome in a 58 year old Moroccan gentleman diagnosed at Mater Dei Hospital’s Cardiothoracic Unit, Malta. Our case was unusual due to its association with a bicuspid aortic valve, a single (left) common carotid artery and such a late presentation.

P.184

Prolonged withdrawal of anti-parkinsonian treatment and enteral feeding resulting in a neuroleptic malignant syndrome

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Introduction: Neuroleptic malignant syndrome (NMS) is an adverse reaction reported to occur with pharmacological agents active on the central dopaminergic system.

A 69 year old male suffering from Parkinson’s disease on nasogastric tube (NGT) feeding presented to our rehabilitation hospital after being treated for aspiration pneumonia in an acute hospital setting. His treatment included co-careldopa 110mg six times daily, ropinirole 2mg three times daily and amantadine 100mg daily. Intravenous antibiotics were administered, and a percutaneous endoscopic gastrostomy (PEG) tube was inserted since the patient was non-compliant with NGT placement.

After starting continuous feeding he became increasingly dependent and was febrile, with increased rigidity in all four limbs. C-reactive protein levels peaked at 160mg/l and creatine kinase (CK) levels were 1931U/l. The clinical picture was indicative of NMS, meeting all 3 major Levenson’s criteria (fever, rigidity, elevated CK).

The feeding regimen was altered so that levodopa was taken an hour prior to bolus feeding and amantadine was re-started. Thereafter he made noticeable clinical improvement with CK levels declining steadily.

Conclusion: The patient had missed 16 doses of co-careldopa and 8 doses of ropinirole over 7 days due to issues with proper NGT placement. Amantadine doses were missed for 17 days due to drug unavailability. Moreover levodopa was administered concurrently with feeds resulting in reduced drug absorption. The case highlights the importance of timely and adequate therapy in patients with Parkinson’s disease as prolonged drug withdrawal and drug-feed interactions can lead to potentially life threatening NMS.

P.185

Case report: intussusception with Meckel’s diverticulum in a 3 year old with Edward’s syndrome

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Introduction: We describe a child with trisomy 18 aged 3.5 years who developed bowel obstruction due to an intussuscepting Meckel’s diverticulum who, despite underlying problems including established pulmonary hypertension, tolerated anaesthesia and surgery and recovered well after corrective intervention. Whilst Meckel’s diverticulum is a widely reported finding in patients with Edwards syndrome and is a known cause of intussusception, the incidence of intussusception in such

patients is unknown. Most fetuses with Edwards syndrome die during the embryonic and foetal life. However, a small number of children with trisomy 18 survive beyond their first year of life. Knowledge about the clinical picture and on the prognosis of Edwards syndrome patients is of great importance with respect to neonatal care and the decisions about invasive treatments. The possibility of long-term survival should be considered when counselling parents regarding trisomy 18.

Conclusion: Whilst Meckel's diverticulum is a widely reported finding in patients with Edwards syndrome and is a known cause of intussusception, the incidence of intussusception in such patients is unknown. This is likely the result of several factors. Firstly, the majority of infants with Edwards syndrome die during the intra-uterine period. Secondly, those that do survive birth are often assigned for palliative care with no invasive management and thus succumb to the more serious clinical manifestations of the syndrome, such as cardiac malformations and respiratory difficulties, early in infancy. Of the less than 10% of cases that survive to 1 year, many do so with the help of invasive surgery. Baty et al (1994) reported that at age 1 year, there was an average of approximately 2 operations per living child (4). Knowledge about the clinical picture and on the prognosis of Edwards syndrome patients is of great importance with respect to neonatal care and the decisions about invasive treatments. The speed to have a confirmed diagnosis is important for making decisions about medical procedures. Often, interventions are performed under emergency conditions, without many opportunities for discussion, and they involve difficult medical and ethical issues (2).

P.186

Medical students' plans for foundation training: Malta or UK?

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Introduction: Monitoring the migration of doctors is important to ensure the local health care system remains fully staffed. The aim of this study was to determine the number of medical students who currently intend to complete Foundation training in the Maltese Islands.

Methods: A questionnaire was distributed to all students present during lectures on several occasions between October and November 2014.

Results: The response rate was 50.2%, of whom 56.4% (Year 1), 64.5% (Year 2), 61% (Year 3), 53.6% (Year 4) and 93.1% (Year 5) students aim to commence Foundation training locally. Almost 88% of students provided motives, ranked from most to least frequent: local student, excellent local FY Programme, experience abroad, finances, familiar with Maltese system, International student, opportunities available, and language barrier. There are 185 students in Year 1 (9.7% non-EU; 27% are EU (non-Maltese)), 183 in Year 2 (6.6% non-EU; 31.1% EU), 165 in Year 3 (15.2% non-EU; 21.2% EU), 102 in Year 4 (10.8% non-EU; 11.8% EU), and 112 in Year 5 (10.7% non-EU; 0.9% EU).

Conclusion: As students progress through training, the proportion planning to stay in Malta to complete their Foundation training increases. The high ranking of the Malta Foundation School is a strong motive. Although these results appear to augur well for the near future, the large proportion of non-local students currently in Years 1-3 may shift the balance in 2017-2019.

P.187

Clinical students' perception of their educational experiences (2014-2015)

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Introduction: The aim of this study is to examine students' perception of their undergraduate educational experience at the University of Malta Medical School.

Methods: A questionnaire was distributed to 379 Year 3 to Year 5 medical students who were present during lecture hours between October and November 2014.

Results: There were 196 respondents in total (51.7% response rate). Just over 30% and almost 50% of Year 4 and 5 students respectively felt they were being prepared to become good doctors, down from 68% in Year 3. Almost 90% of students in Years 4 and 5 reported that important clinical skills are not covered in the curriculum, up from 63% in Year 3. Only just over 50% of Year 4 and 5 students reported that the hospital was serving its purpose as a teaching hospital, down from 72% in Year 3. Nearly 75% of clinical students reported that the number of students in their cohort affects the quality of their education.

Conclusion: Students become more aware of the skills and knowledge required of a good doctor when they start their clinical years. Despite the extensive clinical exposure, the majority of Year 4 and 5 students still feel unprepared for the world of work. Efforts to make the clinical learning environment more student-friendly and increase the time allocated for clinical skills teaching is essential to compensate for the increasing number of medical students.

P.188

Rib angulation

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Introduction: Optimal design in pressure vessels has resulted in filament-wound pressure vessels constructed of filaments bound within a matrix, resulting in high-strength, lightweight pressure vessels. Since the properties of reinforcing fibers in pressure vessels are highly direction-specific, the reinforcing fibers are optimally loaded along their length. This implies that ribs should also be oriented in the load direction. Rib angulation was investigated to assess whether human ribs behave as efficient struts.

Methods: The angulation of vector forces in the chest wall was measured using of Finite Element Analysis (FEA) computer simulations of a model of the chest wall based on the mean measurements of eight Caucasian male thoracic computerised tomography (CT) scans. A literature search was performed on adult rib angulation. Changes in rib angulation with development were investigated using CT data at different ages.

Results: The FEA ellipsoid model and Gayzik series were statistically significantly correlated ($r=0.753$, $p=0.01$). There was no correlation between the ellipsoid model and Dansereau series (Pearson $r=0.378$ $p=0.281$, t -test $p=0.163$), nor between the two reference series, the Gayzik and Dansereau series (Pearson $r=0.112$, $p=0.758$, t -test $p=0.353$). However the ellipsoid model was within one standard deviation range of the large Dansereau series. Rib angulation increases with age, two-way ANOVA $p<0.001$, and rib level, $p<0.001$.

Conclusion: Human ribs in the adult are angulated close to the resultant chest wall force vectors. This means that human ribs are stable and do not move on coughing. This has important survival implications, due to the survival advantage resulting from ribs functioning effectively as struts.

P.189

Patient survival following renal transplantation in Malta

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Directorate of Health Information and Research

Introduction: The Malta National Transplant Register (MNTR) was set up in 1999 and collects information regarding organs harvested in Malta, whether transplanted locally or abroad. The aim of the study was to determine survival of renal transplant patients in Malta and to compare this to Europe.

Methods: All renal transplants registered in the MNTR up to 2010 were followed up to end of 2014 (N=127) through linkage with the mortality register. Crude survival with corresponding confidence intervals were calculated using Kaplan-Meier method.

Results: 1,2 and 5 year survival in recipients of a cadaveric kidney improved from 82.4% (95% CI 68.8 – 90.4), 82.4% (95% CI 68.8 – 90.4), 66.7% (95% CI 51.9 – 77.8) for transplants conducted in 1999-2004, to 87.0% (95% CI 73.2 – 93.9), 87.0% (95% CI 73.2 – 93.9), 77.8% (95% CI 62.7 – 87.4) for transplants conducted in 2005-2010. 1, 2 and 5 year survival of local recipients of a live kidney for the period 1999-2010 was 96.2% (95% CI 75.7-99.5), 92.3% (95% CI 72.6 – 98) and 88.5% (95% CI 68.4 – 96.1) respectively. In general, crude average survival reported by European Registries for transplants from 2004 – 2008 falls within survival ranges found for cadaveric and live kidney transplants in Malta.

Conclusion: Since 1999, there has been an improvement in the survival of patients receiving a renal transplant in Malta. Considering the small numbers and wide confidence intervals, crude survival of patients in Malta compares relatively well with the available data from other transplant registries in Europe.

P.190

Does it still make sense to define adequate competency as a fixed value: the case for standard setting

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Introduction: Until 2014/15 most examinations in the biomedical sciences consisted of negatively marked True/False questions and short response questions. The aim of this study was to assess the effect of the change in the assessment method to best of four questions in 2014/15.

Methods: The anonymized published exam results of each study unit were obtained from SIMS from 2010/11 to 2014/15. The mean mark and standard deviation for each study unit was calculated for each year.

Results: In 2014/15, there was a significant increase in mean marks in all study units examined by means of best of four multiple choice questions. For example, in the musculoskeletal system (Year 1) the mean mark between 2010 and 2013 was 65% (SD 11.4), increasing to 74% (SD 11.8) in 2014-15. Similarly in the gastrointestinal system (Year 2) the mean mark between 2010 and 2013 was 63% (SD 10.7), increasing to 77% (SD 8.6) in 2014-15. Failure rate for the gastrointestinal system fell from 1.8% in 2010-13 to 0.6% in 2014. In the head and neck module (one of the few units retaining the mixed exam approach), the mean mark for the best of four section was significantly higher at 70.7% (SD 16.5) compared with 58.8% (SD 15.7) for the short answer questions.

Conclusion: Students performed exceptionally well in the 2014/15 examination sessions, suggesting that determining the appropriate Pass/Fail score using standard setting is now overdue.

P.191

Investigating the differentiation of HL-60 cell-lines induced by terpinoid and isoquinoline derivatives

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Introduction: Acute myeloid leukaemia (AML) of the M2 subtype is the commonest type of acute leukaemia in adults, resulting from an arrest of the differentiation of leukocytes at the myeloblastic stage, causing unregulated proliferation. Unlike promyelocytic leukaemia, AML cannot be treated with all-trans retinoic acid (ATRA) due to the lack of the 15:17 translocation. The aim of this experiment was to find an appropriate chemical to be used as treatment in order to stop this unregulated proliferation by inducing eventual apoptosis through differentiation.

Methods: On day 0, the cells were exposed to different chemicals at 1µM and 10µM and allowed to incubate under controlled conditions. On days 3 and 5, the MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) and NBTZ (nitroblue tetrazolium) protocols were followed and the plates were analyzed colorimetrically to obtain results.

Results: Out of the 24 chemicals tested, derivatives of terpinoid and isoquinoline showed promising results as indicated by the NBTZ:MTT ratio.

Conclusion: Although these results offer hope for future patients suffering from AML, further investigations need to be carried out to better assess the adequacy of these chemicals for future treatments.

Disclosure: Chemicals were provided by Bruno Botta, whose lab is part of STEM-Chem COST consortium (CM1106), funded by the EU.

P.192

Prioritisation of Infectious Diseases in Public Health

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Infectious Disease Prevention and Control Unit - Health Promotion and Disease Prevention Directorate

Introduction: In 2012 the Infectious Disease Prevention and Control Unit (IDCU) conducted an exercise to systematically prioritise pathogens by public health criteria in order to guide surveillance activities and effectively allocate resources for the prevention and control of infectious diseases in Malta.

Methods: A predetermined standardised weighting and scoring system was utilised to rank 77 selected infectious disease pathogens based on 11 public health criteria: Burden of disease (incidence, severity and mortality); Epidemiological dynamic (outbreak potential, trend and emerging potential); Information need (evidence for risk factors/groups); International duties and public attention; Health-gain opportunity (preventability and treatability). For each criterion a numerical score of -1, 0 or +1 (highlighting increasing importance) was given and each criterion received a weight by which the numerical score of each criterion was multiplied. Seventy-eight local experts in infectious diseases were invited to participate in face to face meetings during which feedback on weighting and scoring by pathogen was collected by means of paper-based questionnaires.

Results: Sixty (76.9%) of the experts completed the questionnaires. The total weighted scores ranged from +56.10 (Severe acute respiratory infections/SARIs) to -96.58 (Erysipelas) with the median being -35.67 (Hepatitis

C). SARIs ranked highest followed by AIDS, HIV, Influenza, campylobacter, nosocomial infections and MRSA.

Conclusion: The exercise proved to be a useful tool in directing Public Health effort on the infectious diseases of main concern. The Health Promotion and Disease Prevention Directorate is currently liaising with the relevant stakeholders to develop strategies for the prevention and control of the identified priority diseases.

P.193

The investigations taken when a low vitamin B12 level is found, were studied and noted.

Gordon Muscat¹, Jessica Gauci¹, Martha Grima², Nicholas Delicata³, Gerald Buhagiar⁴ ¹(optional), ²

Introduction: Vitamin B12 (B12) is important in many of the body's metabolic processes, and its deficiency has many well known causes and complications. A proper work-up is thus essential when investigating a low B12 level. In this audit B12 deficiency was considered to be B12 levels less than 200 pg/mL.

Methods: A retrospective analysis of the investigations performed on all patients found to have B12 deficiency from January 2014 till June 2014 was done using the Isoft Clinical Manager. The number of patients with B12 deficiency who had associated investigations done were noted.

Results: 21,678 B12 levels were taken in total, of which 1,687 (7.78%) had B12 deficiency. In patients with B12 deficiency, the following number of the following investigations were taken: full blood count: 1667 (98.8%) , folate: 1637 (97.0%), ferritin: 1552 (92.0%) , thyroid stimulating hormone: 1559 (92.4%), T4:1563 (92.6%), anti-intrinsic factor: 62 (3.67%), anti-gastric parietal cell antibody: 120 (7.11%), tissue transglutaminase: 519 (30.8%), calcium: 1176 (69.7%) , albumin: 834 (49.4%), total protein: 656 (38.8%), vitamin D: 76 (4.50%), iron profile: 511 (30.3%), gastroscopy: 79 (4.70%), colonoscopy: 43 (2.56%)

Conclusion: It was noted that full blood count, folate, ferritin, thyroid stimulating hormone and T4 were most commonly taken, that anti-intrinsic factor, anti-gastric parietal cell antibody, vitamin D, gastroscopy and colonoscopy were rarely taken and that tissue transglutaminase, calcium, albumin, total protein and iron profile were taken at an intermediate level. Using this data a guideline will be created so that B12 deficiency can be adequately investigated.

P.194

Conditions associated with vitamin B12, investigation and prevalence.

Gordon Muscat¹, Jessica Gauci², Martha Grima¹, Nicholas Delicata², Gerald Buhagiar¹

Introduction: Vitamin B12 (B12) is involved in many of the body's metabolic processes and B12 deficiency (B12 less than 200pg/mL) is associated with multiple conditions, both causes and complications. The aim of this study is to note the prevalence of conditions associated with B12 deficiency.

Methods: A retrospective analysis of the investigations performed on all patients found to have a B12 level less than 200 from January 2014 till June 2014 was done using the Isoft Clinical Manager. The number of patients found to have conditions associated with a low B12 level was noted.

Results: The total number of patients with B12 deficiency was 1687. 519 tissue transglutaminase levels were taken; 12 (2.3%) were positive. 62 anti-intrinsic factor levels were taken; 7 (11.3%) were positive. 511 iron profiles were taken; 100 (19.5%) of which had iron deficiency anemia. 79 gastroscopies were done, of which 29 (31.52%) had reactive gastropathy, 6 (7.6%) had gastritis and 3 (3.26%) had coeliac disease. 31 colonoscopies were done, of which 5 (11.65%) had IBD, 5 (11.65%) had adenocarcinoma and 1 (2.33%) had colitis.

Conclusion: Colitis, coeliac disease and gastritis were

the least commonly associated conditions; pernicious anemia, gastropathy, inflammatory bowel disease and adenocarcinoma were more commonly associated, while reactive gastropathy and iron deficiency anemia were the most commonly associated. Considering how low B12 levels were poorly investigated, the results showed a number of associated conditions with important implications. This shows that by poorly investigating B12, there is a possibility of missing important diagnoses.

P.195

Audit - Treatment charts and drug prescription at Mater Dei Hospital

Doriella Galea

Introduction: Safe drug prescription is of utmost importance avoiding potential serious harm to our patients. The aim of the audit was to identify any common errors in drug prescription and to identify any possible improvements.

Methods: Five acute medical wards were randomly chosen and the treatment charts of the patients present were reviewed (total of 98). Treatment charts were reviewed and the following considered:

- full patient identification on each treatment chart
- identification of any allergies
- doctor's signature for each prescribed drug
- prescribed treatment should be dated
- prescribed drugs should be written in the appropriate section

Results: All treatment charts had full patient identification details. 45.9% had regular treatment written under the as required section whereas 6.1% had as required medications written in the regular medication section. 3.1% had regular medications written in the as required section and vice-versa. 1% of prescribed drug were not dated.

3.1% of drug written on the treatment chart were not signed. 3.1% did not have clear identification of any possibly allergies. 37.7% of the treatment charts fulfilled the above criteria.

Conclusion: Overall, drug prescription at Mater Dei Hospital was satisfactory but some improvements should be considered. The results indicate that the structure of the available treatment charts should be re-considered to ensure that drugs are prescribed in the appropriate sections. More awareness about drug prescription amongst doctors is necessary.

Disclosure: Nil

P.196

Pressure ulcer prevention in hip fracture patients - are we meeting the standards?

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Introduction: Pressure ulcers in elderly patients can result in reduced quality of life, pain, longer hospital stays, higher healthcare costs and poor rehabilitation outcomes.

Hip fracture patients are at increased risk due to long periods of immobility before, during and after surgery.

Methods: A hip fracture integrated care plan has been developed and is now in use in orthopaedic wards in order to facilitate better assessment and management of patients. The Waterlow score and space for documentation of preventive measures for pressure ulcers have been included within this booklet. Patients sustaining a hip fracture from July 2015 were enrolled into the study. Data collected included: age, gender, comorbidities, documentation of Waterlow score and presence of pressure ulcers, documentation of methods of prevention and re-assessment. The guidelines developed by the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance was used as a standard for this audit.

Results: This is an ongoing audit and full results will be available in due course. Preliminary results indicate that the Waterlow score and assessment is very often left out or is

incompletely filled in. Documentation of methods of prevention for pressure ulcers is lacking too.

Conclusion: Prevention of pressure ulcers and assessment is a marker for quality of care. Pressure ulcer risk assessment is a duty for every healthcare professional involved in the care of the patient.

P.197

Centralisation of trauma services within a UK trauma network has shown changes in clinical outcomes at a major trauma centre

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Introduction: A major reorganisation of trauma services occurred in the England in 2012, with creation of major trauma networks with a centralized specialist trauma centre, receiving patients from significant geographical distances. This reconfiguration is reviewed with respect to clinical outcomes

Methods: Data were analysed from a prospectively maintained trauma database from a Major Trauma Centre in Liverpool, UK between Nov'11 and Jun'14. Primary outcomes included basic demographics, ISS, intervention and mortality rates. Data were compared pre and post centralisation, utilising Fisher's exact test

Results: The pre-centralised study period was from Jan'12 to Oct'12 and the post-centralisation period was Nov'12 to Jun'14. Mean monthly admissions increased significantly 15.7 vs 63.1 ($p < 0.005$). There were no significant difference in demographic statistics and GCS levels. There are more patients with an injury severity score > 15 in the pre centralisation group, 58% vs 27% ($p < 0.0001$). Less patients required radiological or operative intervention, 28% vs 13% ($p < 0.0001$), fewer patients required intensive care, 18% vs 12% ($p = 0.0569$). Similar numbers of patients required neurosurgical transfer, 12% vs 11% ($p = 0.506$). There was a non-significant decrease change in mortality rates, 7% vs 5% ($p = 0.2373$).

Conclusion: There has been a significant increase in volume of major trauma at our institution since Nov'12, with a small decrease in overall mortality. The proportion of severely injured patients has reduced but in reality there is a 3.5 times increase in significant trauma cases. The management has become more refined, with no worsening of change to morbidity or mortality, demonstrating the effect of this institutional increase in volume.

P.198

Risk factors for perineal injury during childbirth in Malta between 2000 and 2014.

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Introduction: Perineal trauma during delivery may result in faecal incontinence, faecal urgency, chronic perineal pain and dyspareunia, and hence are a cause of maternal morbidity. Our aim was to determine which maternal, neonatal and obstetric variables are associated with an increased risk of perineal lacerations during vaginal delivery of live born singletons in Malta.

Methods: We analysed data obtained from the National Obstetrics Information System for all vaginal deliveries of singleton live births in Malta between 2000-2014. The predictor variables were categorized into three groups: maternal, neonatal and obstetric. The main outcome variables were: no damage, episiotomy, perineal laceration and both episiotomy and perineal laceration. The significance of associations was determined using univariate analysis in IBM SPSS Statistics software package, version 22.

Results: Significant associations were found between maternal age, parity, height, body mass index, cigarette

smoking during pregnancy, type of delivery (unassisted, forceps or ventouse), use of epidural analgesia, infant sex, birth weight, gestational age, year of delivery and perineal trauma during delivery (p values < 0.001). Gestational diabetes ($p = 0.001$) and onset of delivery ($p = 0.006$) were also found to be associated with perineal trauma. Pre-gestational diabetes mellitus ($p = 0.66$) and shoulder dystocia ($p = 0.40$) were not found to be associated with perineal trauma during delivery.

Conclusion: This study further confirms associations between perineal trauma and potentially modifiable risk factors. Contrary to the reported literature, this analysis did not show any association between maternal pre-gestational diabetes mellitus and infant shoulder dystocia and perineal trauma. A multivariate analysis will follow.

Disclosure: Conflict of interest: None.

P.199

An audit on the national colorectal cancer screening programme (CCSP) 2014. Do the candidates fit international screening criteria?

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Introduction: Patients between the ages of 60 and 64 are invited by the Colorectal Cancer Screening Programme (CCSP) to perform a Faecal Immunochemical Test (FIT). Candidates scoring more than 100ng/mL in such an examination are invited to attend for a colonoscopy which is usually performed at Gozo General Hospital under the care of five consultants.

Methods: The candidates' symptoms and FIT values were recorded. The time gap between presentation at Lascaris screening centre and the colonoscopy date was noted. The incidence of bowel abnormalities was recorded. Caecal intubation rate was noted. Colonoscopy exit time was noted.

Results: 59 screening patients were identified. 204 (79%) of them were found to be symptomatic with bleeding per rectum being the commonest symptom with an incidence of 103 (40%). The mean colonoscopy waiting time between the Lascaris visit and the endoscopic procedure at Gozo General Hospital was 44 days. It was noted that there was no significant difference in the colonoscopy waiting time in between asymptomatic and symptomatic candidates. The caecal intubation rate was at 90.4% (235 patients). The documented ileal intubation rate is 7.7% (20 patients). Average colonoscopy duration was at 37 minutes and 59% of colonoscopies lasted between 21 and 40 minutes. Only 5% lasted less than ten minutes

Conclusion: The FIT test is the preferred initial screening tool which is being used internationally. Screening is a strategy used to identify asymptomatic stages of disease. Symptomatic patients should therefore be excluded from the screening programme and referred urgently for further investigation.

Disclosure: nil P.200

Microbiological swabs in cases at the venous ulcer clinic: indications, relevance, empiric antibiotic use and outcomes

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Introduction: The main aim of this audit is to assess whether dermatologists are adhering to guidelines that are designed for the management of venous ulcers and what culture results are showing in response to the actual practice.

Methods: 77 cases of wound swabs taken from patients with ABPI of > 0.8 at the Venous Ulcer Clinic (Sir Paul Boffa Hospital) were collected. Clinical indications to justify such an investigation were noted. Isofit Clinical Manager was used to collect the results of the culture and sensitivity reports. Antibiotic use and its subsequent clinical response are noted for each case which is swabbed. The above mentioned data is collected in an audit proforma sheet for each case and the collective results are processed and tabulated.

Results: 19.5% of swabs were taken routinely without a documented indication of infection suspicion. Cellulitis was the commonest indication for swabbing wounds. Commonest cultured organism (48%) was *Staphylococcus aureus*, 43% of which were MRSA. 67.5% of cases (52) were treated and the

commonest empirical antibiotic used was ciprofloxacin which treated 27% of all cases. 27% of the treated cases had bacteria which were sensitive to the empirical antibiotic use while 9% of empirical antibiotics were “treating” proved resistant organisms.

Conclusion: Better documentation is required. There is a need for stricter adherence to the universal signs of infection as indications for swabbing ulcers. It is evident that a high amount of non-infected wounds are being swabbed and treated empirically, increasing antibiotic resistance

P.201

Audit on A-scan use prior to cataract surgery in Mater Dei Hospital

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Introduction: The A scan is a method of measurement of the eye length from cornea to retina which is usually coupled with keratometry readings so that by use of formulae like SRK, one can measure the required power of an intraocular lens that would refract sharp images on the retina.

Methods: This is a retrospective audit where notes from post-operative refraction visits were used in order to check the A scan method, ultrasound method vs optical method, the postoperative visual acuity and refraction. The notes of post-operative refractions done from November to December 2014 were taken into account.

Results: 55% of the A scans were performed using the Lenstar® while 38% were performed using the ultrasound method. No major difference was noted between the post-operative refraction and resulting visual acuity.

Conclusion: Either method is useful. The advantages of the Lenstar® include that it is less invasive, does not transmit infections, more tolerable. The advantages of the ultrasound method include the fact that it can give readings in very dense cataracts and in not so co-operative patients. Documentation of ophthalmic notes needs improvement. A pre and post op cataract booklet is an idea that emerges from such audit. It could include all pre-operative and intraoperative data and post-operative examination in one booklet that can be easily identified.

P.202

An audit on venous thromboembolism prophylaxis of admissions at Gozo General Hospital

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Introduction: Hospitalisation poses a risk to venous thromboembolism (VTE) due to several reasons, including immobility, the specific illnesses in question and surgery. Some patients present to hospital with prior risks for VTE. These factors should be identified as early as possible on admission to guarantee adequate prophylactic measures.

Methods: 38 admissions at the Gozo General Hospital were assessed. The risks documented were identified and tabulated. Prophylaxis prescription with enoxaparin or thromboembolic deterrent (TED) stockings were noted. The standards used were; SIGN Prevention and management of venous thromboembolism guidelines 2010, NICE guidelines on DVT prophylaxis.

Results: It was noted that despite having identified VTE risks in most (92%) patients, only 11% of the “at risk” patients were prescribed prophylactic enoxaparin on admission. It is noted that 72% of patients had more than one VTE risk while 38% had two or more risks. 37% of patients with VTE risks had bleeding risk factors and none of these were prescribed enoxaparin. No TED stocking prescription was documented.

Conclusion: VTE prophylaxis prescription needs improvement. A casualty sheet reminder is suggested. Re-auditing is necessary.

P.203

Can serum bio-markers decrease radiological investigations in patients with suspected small bowel Crohn's Disease?

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Introduction: Computed tomography enterography (CTE) and Magnetic resonance enterography (MRE) are useful modalities in the evaluation of small bowel (SB) Crohn's disease (CD). However, both have their drawbacks, with CTE utilising ionising radiation and MRE being less easily available and being a challenge for claustrophobic patients. The aim of this study was to determine if the serum bio-markers ESR and CRP can predict small bowel pathology.

Methods: This was a retrospective analysis were all CD patients above the age of 18 who underwent CTE or MRE between October 2013 and February 2015 were identified and their findings documented. Their radiological reports and serum bio-markers were reviewed.

Results: 62 patients were recruited (50 patients with CTE and 12 patients with MRE). SB pathology was present in 59.6% of patients; these being active SB inflammation in 25.8%, a SB stricture in 30.6% and active inflammation with associated SB stricturing and fistulating disease in 3.2%. 16.1% of patients had an incidental inflammatory process outside the SB. None of the patients with completely normal imaging had a raised bio-marker. However, biomarkers were raised in 88.9% of patients with an inflammatory process outside the SB. The ESR's sensitivity for SB pathology was 71.9% and the specificity was 100%, whilst these were 53.1% and 100% respectively for the CRP.

Conclusion: CTE and MRE are important tools in management of CD patients; however, serum bio-markers may help clinicians decide when to request these investigations.

P.204

Reason for encounter in Maltese health centres during Summer 2014

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Introduction: Over 1,356,000 services are delivered annually by health centres which offer free-of-charge 24 hours walk-in primary care service.

Methods: The study aim was to analyse demographic data and reasons for encounter of patients walking in health centres between the 16th of July and the 13th of October 2014. The second version of the International Classification of Primary Care (ICPC-2) was used to code encounters. Patients attending health centres were anonymously recorded by 8 doctors working 48 hours a week each. Data was organised according to sex, age, locality and ICPC-2 reason for encounter.

Results: 6,421 patients from the 3 main (Mosta, Floriana, Paola) and 5 satellite health centres were reviewed. Age of patients ranged between 1 month and 96 years. The commonest reasons for encounter in descending order were musculoskeletal and respiratory complaints followed by general and administrative encounters and skin complaints. Results obtained were similar to local and overseas studies investigating reasons for encounter in primary care.

Conclusion: Evaluation of needs assists in delivering quality care. Such study can serve as a baseline method through which the national primary care services can be audited in order to allocate resources, personnel, training and funding towards the changing demographics and primary care demand.