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Highlight: Abstracts from the 4th International Academic and Research Conference 2014, Manchester, UK

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Introduction

The World Journal of Medical Education and Research (WJMER) (ISSN 2052-1715) is an online publication of the Doctors Academy Group of Educational Establishments. Published on a quarterly basis, the aim of the journal is to promote academia and research amongst members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from around the world. The principal objective of this journal is to encourage the aforementioned, from developing countries in particular, to publish their work. The journal intends to promote the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting edge technology and those who need to innovate within their resource constraints. It is our hope that this will help to develop medical knowledge and to provide optimal clinical care in different settings. We envisage an incessant stream of information flowing along the channels that WJMER will create and that a surfeit of ideas will be gleaned from this process. We look forward to sharing these experiences with our readers in our editions. We are honoured to welcome you to WJMER.

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Contact	:	wjmer@doctorsacademy.org.uk

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Poster Presentations

THE IMPACT OF GLAUCOMA VIRTUAL CLINICS ON OUTPATIENT SERVICES

Ali A*, Rahman I
Blackpool Victoria Hospital, United Kingdom

Background: Currently huge pressures exist on General ophthalmic clinics for the review of patients with a wide variety of conditions. Throughout the UK glaucoma virtual clinics are being established with the intention of reducing the strain on resources in outpatient ophthalmic departments.

Aim: This service evaluation aims to quantify the present consumption resources by stable glaucoma patients in outpatient clinics and thereby assess whether the future implementation of a glaucoma virtual service would have a significant impact in freeing resources.

Methods: Data was gathered retrospectively on 2206 patients presenting to general clinics run by all consultants at Blackpool Victoria Hospital, during July 2013. Data collected included the number of clinics, number of doctors, number of patients, number of patients' not attending clinics, number of visual fields undertaken, the number of suspect glaucoma, ocular hypertensive, and suspicious discs and number of 6, 9 and 12 month glaucoma follow-ups.

Results: For the entire month: 2,206 patient booked, 78 general clinics, 172 doctor sessions and 388 visual fields booked. 21% of all patients presented with glaucoma/ glaucoma related conditions. 11.4% of all patients were for 6-12 month glaucoma follow-ups. An average of 13 patients were booked per doctor session.

Conclusion: A significant percentage of patients reviewed in general clinics are stable glaucoma patients. A large amount of resources are dedicated to such patients. Transfer of such patients to virtual clinics can increase clinic capacity, decrease new patient waiting times and allow resources to be transferred to other pressurised clinics. Further work should be undertaken to review whether or not other stable conditions could be better managed in a similar fashion.

SPIGELIAN HERNIA: A CASE REPORT OF AN ABNORMAL ABDOMINAL SWELLING

McAleer SF*, Ehdego Z, Thomas G, Eljaafari M
South West Acute Hospital, Western Health and Social Care Trust, Northern Ireland, UK

Spigelian hernia is a rare surgical presentation caused by a defect in the rectus sheath. The hernia commonly presents below the linea arcuata and requires a high index of suspicion due to its vague clinical presentation. This 75-year-old lady presented with severe, intermittent pain and tenderness over her right iliac fossa which was exacerbated by bending forward and carrying heavy items. The patient's high body mass index (BMI) hindered our ability to detect the protrusion on clinical examination. There was no cough impulse and bowel sounds were normal. The only clinical finding was the patient's report of occasional discomfort over the hernia site. Contrast enhanced computed tomography (CECT) revealed no strangulation. Management involved open surgical repair with mesh application to relieve pain and prevent strangulation. An open operative approach with mesh application between the oblique muscles and covering the lateral border of the rectus muscles was used in this case. While it has been shown that a laparoscopic approach results in fewer rates of infection, early resumption of daily activities, less postoperative pain, and avoids opening the external oblique aponeurosis, an open approach allows better visualisation of the weakness in the abdominal muscle1. The optimal surgical approach in the management of spigelian hernias is still evolving. The open approach with or without mesh is the procedure of choice in complicated cases and where laparoscopy is not available. Spigelian hernia remains an enticing entity because of its rarity, the concealed nature of its symptoms and the varied approach to its management.

References 1: Moreno-Egea A, Carrasco L, Girela E. Open vs. laparoscopic repair of spigelian hernia. Arch Surg. 2002;137:1266–8.

EXTERNAL LIGHT COVER DEFIBRILLATOR WITH GPS LOCATOR.

Adami F*, Cecchini M
University Hospital Emergency Medicine, University of Pisa (Italy)

Background: The sequence of actions that are needed to cope with sudden death are defined as the "Survival Chain". The effective implementation of the four rings (Early Access, Early CPR, Early Defibrillation and Early Advanced Care) allows for the best results in terms of patient survival. Each link in this chain is composed of several subrings and the improvement of each of these subrings leads to the improvement of the entire chain.

Description of Innovation: We have built an external light cover that is applied on top of an automated defibrillator and that is controlled by an Arduino processor. The cover has three main tasks: send SMS containing the geolocation, light up completely when the defibrillator is turned on and visually giving the correct rhythm (through an alternating sequence of switching on and off) during the execution of the CPR and always visually indicate feedback to ensure proper enforcement of CPR (via a third electrode that detects the right frequency, depth of chest compressions and chest recoil).

Discussion: In noisy or dark environments, or with hearing-impaired bystanders, the use of a light signal can help individuals to survey the scene and properly perform CPR. Furthermore, the application of a third electrode allows us to detect real-time performance of CPR and allows the operator to correct its errors through a visual signal. Finally, sending SMS containing the geolocation to the Emergency Medical Services when the defibrillator is taken from the box (placed in a public space) and also when it is turned on allows a rapid identification of the place of intervention.

Conclusion: The purpose of this device is threefold: to improve the quality of CPR, to improve the interaction between CPR and defibrillator and allow for the rapid geolocation of the patient.

AUDIT OF RATE OF VENOUS THROMBOEMBOLISM FOLLOWING LOWER LIMB ORTHOPAEDIC SURGERY OVER 1 YEAR IN A DISTRICT GENERAL HOSPITAL.

Stout R*, Ismail M, Paul, E
Central Manchester Foundation Trust, United Kingdom

Background: This study aimed to examine whether lower limb surgeries carried out in a district general hospital over the course of 1 year led to venous thromboembolism (VTE) events and whether patients had received appropriate thrombolytic prophylaxis if they developed VTE.

Methodology: All lower limb surgeries carried out between 01/01/2012 and 31/12/2012 were examined to discover whether they resulted in a VTE event up to 6 months post-operatively. Each patient record was reviewed with regards to post-operative notes, discharge summaries, follow-up clinic letters, A&E admissions and relevant investigations. If a patient was found to have had an event it was determined whether they had received appropriate VTE prophylaxis post-operatively as per NICE guidelines.

Results: 682 lower limb surgeries were carried out in this period. 1.03% of operations resulted in VTE event (n=7/682); 0 88% (n=6/682) DVT, 0 15% (n=1/682) PE. There were no (n=0/682) mortalities which resulted from these events. 4 of these patients had elective total knee replacement, 2 were admitted with fractured neck of femur and 1 patient underwent PIP fusion. 2 patients had previously had a VTE event. All patients had received appropriate VTE chemo-prophylaxis; however, none of these patients went home with TED stockings prescribed.

Discussion: In this study, patients who experienced a VTE event post-operatively had received appropriate chemoprophylaxis. Patients who had previously had a VTE event were at an increased risk of future events.

Conclusion: Patients who have previously had a VTE event are at increased risk of future events. Therefore, in patients undergoing orthopaedic lower limb procedures, this should be taken into account when considering VTE prophylaxis. As per NICE guidelines, all patients should be commenced on mechanical VTE prophylaxis at admission which should be continued until mobility is no longer reduced. In this study, chemoprophylaxis was prescribed appropriately; good practice should be maintained.

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ELECTRONIC PRESCRIBING - ARE WE KEEPING OUR DRUG CHARTS UP TO DATE?

Barnes J, Skelton D*, Bewick G, Heed A, French J
Freeman Hospital, Newcastle Upon Tyne

Introduction: Electronic prescribing is becoming increasingly common and has many benefits, both in terms of usability and safety. However, lack of physical drug charts at the end of patients' beds may reduce how regularly medications are reviewed, increasing the risk of medication errors. One example of this is expired medications being left on drug charts, which may lead to confusion on rounds and lead to patients receiving incorrect medications. This audit assessed whether expired medications were being left on drug charts on a surgical ward in a tertiary centre.

Methods: Data was collected prospectively from all patients over two audit periods three months apart. Total number of medications and number, and duration, of expired medications was recorded. Between periods a change in practice was made. An education programme was run for medical staff, educational posters were displayed and electronic drug chart settings were reconfigured to make expired medications more obvious and easier to cancel.

Results: 34 patient encounters, with 404 regular medications (mean 11.9 per patient), were reviewed in the first period. In the second period there were 46 patient encounters with 511 medications (mean=11.1). In the first cycle 15.1% (61) of medications had expired, falling to 5.1% (26) in the second ($p<0.01$). The mean duration of expiration fell by 32.8% between periods, from 6.7 days to 4.5 days ($p=0.01$). Before intervention 67.6% (23) of patients had an expired mediation still prescribed, falling to 28% (13) in the second period ($p<0.01$).

Conclusions: Despite its benefits electronic prescribing may reduce frequency of medication review, leading to errors. The simple intervention used in this project led to a change in practice, with more regular drug review, evidenced by a significant reduction in prevalence of expired medications left on drug charts.

ACCURACY OF GP REFERRALS FOR SOFT TISSUE KNEE INJURY: A REGIONAL RETROSPECTIVE AUDIT.

Gibson D*
University of Glasgow, United Kingdom

General practitioner referrals for orthopaedic opinion are often deemed inappropriate or misdirected to the wrong specialist [1]. Orthopaedic service activity has risen by 12% in the last decade [2]. This audit aimed to determine the accuracy of orthopaedic referrals for soft tissue knee injury and identify how these could be improved. Retrospective analysis of 163 patients seen at Glasgow Royal Infirmary's knee clinic between November 2012 and December 2013 allowed analysis of the content of referrals by identifying key clinical features mentioned by general practitioners. Orthopaedic appointment outcomes and orthopaedic appointment outcomes based on quality of referral were assessed. Referrals containing three or less pieces of key clinical history features accounted for 92 of 163 referrals (56.4%). Suggested improvements included the development of electronic referral pro-forms and weekly allocated telephone time to consult with specialists. After orthopaedic opinion, 65 patients (39.9%) were referred for physiotherapy and 53 patients (32.5%) were discharged. This suggests more needs to be done to allow general practitioners to manage patients in a primary care setting. Interactive peer education to update general practioners knowledge base is an idea to enable effective patient management. Analysis of general practitioners referrals may be used to identify ways in which patient management could be improved. Interactive peer education and better communication between orthopaedic specialists and general practitioners might help improve appropriateness of referrals.

References [1] Speed C A, Crisp A J. Referrals to hospital-based rheumatology and orthopaedic services: seeking direction. Rheumatology. 2005; 44(4): 469-471. [2] Audit Scotland. Review of orthopaedic services. Edinburgh: Audit Scotland, 2010.

MALIGNANT MELANOMA OF THE ORAL MUCOSA.

Morris K*, Hall G, Blackburn T
University of Manchester, United Kingdom

Background: Primary oral melanoma (POM) is a rare neoplasm typically of the palate or maxillary gingiva that originates due to the proliferation of melanocytes. POMs possess aggressive, anomalous behaviour and early haematogenous spread associated with a 5-year survival of 12.3-16.6%.

Case Report: A Caucasian female presented at 53 years of age complaining of a painless upper left sided ulcer and gum recession associated with a tingling sensation. Her background included breast cancer and osteopenia for which she received intravenous bisphosphonate treatment. Examination revealed an unpigmented, endophytic ulcer with exposed tooth roots. Biopsies of the gingival mucosa showed an amelanotic malignant melanoma. The patient was managed with a left hemi-maxillectomy and left selective neck dissection with reconstructive surgery. Significantly, bisphosphonate-related osteonecrosis of the jaw (BRONJ) was initially suspected as the aetiology of her ulcer. Three patients presenting with POM at Manchester Royal Infirmary teaching hospital between 2009 and 2014 are explored. Up to date follow up information will be provided for all three patients.

Discussion: Identification of only three cases over a 5 year period in a major head and neck cancer surgical centre highlights the rarity of POM. All three presented with late stage disease reflecting an insidious development in contrast to its cutaneous counterpart. Treatment is primarily surgical resection with the excised tumour tissue also allowing for molecular testing of a mutation, which if present, predicts response to a novel targeted therapy. The differential diagnosis of pigmented patches in the mouth will be discussed as will the entity BRONJ which in our case of amelanotic melanoma, confused the clinical picture.

Conclusion: Awareness of pigmented oral lesions and their possible causes is important among medical and dental professionals as diagnosis of POM at an early stage of disease provides the best hope of long term cure.

SEVERE REFRACTORY COELIAC DISEASE WITH RESPONSE ONLY TO PARENTERAL NUTRITION: A CASE REPORT.

Mehta R*, Ng KYB, Mohamed S, Mohamed Z, Arnold J
Ealing Hospital NHS Trust

Background: Refractory coeliac's disease (RCD) is characterised by recurrent or persistent malabsorptive symptoms and villous atrophy, despite strict adherence to a gluten-free diet (GFD) for at least 6 months and where other causes of malabsorption including malignancy have been excluded. There is limited evidence and guidance on the effective management of these patients. We describe a case of severe RCD, with symptoms controlled effectively only by total parenteral nutrition (TPN).

Case Report: This 68 year old woman initially presented to clinic with persistent non-bloody diarrhoea and vomiting. A diagnosis of coeliac's disease was confirmed with a positive tissue transglutaminase assay and histology. A strict GFD was ineffective and thus she was commenced on oral steroids. However, she represented 6 months later with 13kg weight loss (16.7%), ongoing abdominal pain and diarrhoea, with bowels opening 16 times a day. She was oedematous, had an albumin of 12g/L and required hospital admission. She was treated for pancreatic insufficiency and treated presumptively for small bowel bacterial overgrowth with no resolution of symptoms. We ruled out infectious causes and investigated for small bowel malignancy; all results were negative. Small bowel enteroscopy showed ulcerative jejunitis. She was given 5 days of TPN, following which her symptoms improved and albumin normalised. This was sustained with symptom resolution and weight gain seen at follow up.

Discussion: In our case of severe RCD, symptoms persisted despite a strict GFD, treatment with steroids, antibiotics and pancreatic supplementation. There is limited guidance for management options in patients with RCD and only GFD has been shown to be effective. TPN enabled weight gain and total control of symptoms in our case.

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Conclusions: TPN successfully and rapidly induced remission in this case. A short period of TPN should be considered as a potential component of management in patients with severe RCD.

EVALUATING THE DIAGNOSTIC FEATURES OF THE PENTALOGY OF CANTRELL: A LITERATURE REVIEW

Nawab F*, Musbah, O
Barts and The London School Of Medicine and Dentistry, United Kingdom

The Pentalogy of Cantrell (POC) is an anatomopathological syndrome, with the full spectrum described by Cantrell in 1958. It is composed of five congenital defects: omphalocele, anterior diaphragmatic hernia, sternal cleft, ectopia cordis and intracardiac defects. This literature review aims to fill a gap by examining the incidence of the defects in the diagnosis of POC. A comprehensive literature search of 4 medical databases (PubMed, Cochrane, Embase and Google Scholar) was undertaken using the keywords Pentalogy of Cantrell with no language restriction. Parameter of evaluation was specific mention that a diagnosis of POC was made. All intracardiac defects were considered. Exclusion criteria were inability to access full text, and patients that exhibited defects other than the pentalogy. Mortality was not a criterion. 172 studies were reviewed, 21 met the search criteria and 68 patients were included in the study, highlighting the rarity of the disease. 49(72%) patients were reported to have intracardiac defects, 34(50%) had ectopia cordis, 35(51%) had omphalocele, 45(66%) had sternal cleft defect and 44(65%) had anterior diaphragmatic hernia. 10(15%) patients had two of the defects present, 33(49%) had three of defects, 22(32%) had four of the defects and only 3(4.4%) patients had all five defects present. The criteria for diagnosis of Pentalogy of Cantrell are not conclusive. Incidence between the abnormalities was minimal. There was no significant defining characteristic for POC, but patients exhibiting full pentalogy criteria were rare.

EVALUATION OF EFFECTIVENESS AND SAFETY OF OZURDEX IMPLANT FOR TREATMENT OF MACULAR OEDEMA SECONDARY TO RETINAL VEIN OCCLUSION AND DIABETIC RETINOPATHY.

Putri C*, Jain A, Lo A, Wasim M
Royal Oldham Hospital, United Kingdom

Introduction: Ozurdex is a long-acting intravitreal dexamethasone implant which is licensed for the treatment of macular oedema secondary to central/branch retinal vein occlusion (CRVO/BRVO) and posterior uveitis. Studies show that Ozurdex is a promising new treatment for diabetic macular oedema (DMO). The aim of this study is to evaluate the effectiveness and safety of Ozurdex for treatment of macular oedema secondary to CRVO, BRVO and DMO.

Method: A prospective study, collecting data from 27 Eyes of 25 patients with persistent macular oedema secondary to BRVO (22%), CRVO (22%) and diabetic retinopathy (56%) who had Ozurdex implanted from May 2012 to March 2013, was conducted.

Results: For BRVO, the mean change from baseline BCVA were 15±18 (p=0 32), 18±16 (p=0 34) and 10±17 (p=0 54) at week 1, month 2 and 6. For CRVO, the mean change from baseline BCVA were 4±8 (p=0 44), 10±12 (p=0 77) and 5±9 (p=0 57) at week 1, month 2 and 6. For DMO, the mean change from baseline BCVA were 4±4 (p=0 37), 5±7 (p= 0 23) and 1±5 (p=0 65) at week 1, month 2 and 6. Mean reductions in CRT at 2 months were 254±212µm (p=0 02) for BRVO, 191±201µm (p=0 08) for CRVO and 127±177µm (p=0 09) for DMO. Safety profile of Ozurdex is acceptable without significant complication.

Discussion: Relatively poor results in the diabetic group may be related to these being refractory cases with longstanding disease. Limitation of this study is in the small sample size. Based on this study and other relevant studies, Ozurdex can safely be used not only as a routine licensed treatment for macular oedema secondary to BRVO and CRVO, but also as unlicensed treatment for DMO.

Conclusion: Ozurdex is clinically effective in treatment of macular oedema secondary to BRVO, CRVO and DMO.

AN AUDIT OF PRE-OPERATIVE FASTING TIMES IN ELECTIVE SURGICAL PATIENTS: ARE WE MEETING STANDARDS?

Alldis J*
Central Manchester Foundation Trust

'Nil by mouth after midnight' has been rigidly adhered to by practitioners due to fear of aspiration of gastric contents and its life threatening consequences. Revised guidelines take into account different rates of gastric emptying of solids and clear liquid. New guidelines state that clear fluids can be safely consumed up to 2 hours prior to induction of anaesthesia in healthy adult patients undergoing elective surgery. Fifty patients scheduled for 'same day admission surgery' received a questionnaire in theatre recovery prior to going into the anaesthetic room that was filled out with assistance of the theatre staff. The questionnaire comprised of 6 questions covering areas including how the patient received information on fasting and their awareness of its importance in practice and when they had last consumed clear fluid. Only 32% of patients are currently adhering to guidance and drinking fluids up to 2 hours prior to anaesthesia. 35% of patients had clear fluids between 3 and 6 hours leaving 40% that are still not consuming clear fluids for over 6 hours prior to anaesthesia, significantly longer than recommendations. 80% of patients admitted to receiving verbal information at preoperative assessment and 72% to receiving a leaflet containing fasting information which is reflected by 70% of patients aware on the day of surgery of the 2 hour period they should not consume clear fluids. 60% of patients did not understand the reasons behind fasting and its importance. It is evident that at present patient adherence is significantly low and this could be due to lack of understanding of reasoning and importance of fasting.

DOES THE 2 WEEK REFERRAL PATHWAY FOR SUSPECTED COLORECTAL CANCER ALTER THE MANAGEMENT IN PATIENTS OVER THE AGE OF 80?

Mr. K.Goonetilleke, Mr. Y. Rajjoub*, Dr. N. Saffaf
Birmingham Heartlands Hospital

Aims: The aim of this study was to investigate the diagnostic pick-up rate of colorectal cancer and outcomes in patients over 80 who presented to the colorectal cancer rapid access clinic, to see if this pathway altered their management. Introduction The low diagnostic yield of "red flag" referrals for suspected colorectal cancer is well documented with pick-up rates of 3 – 14%.It would be useful to find out the outcomes of octo and nongenerians which constitutes three million of our population and is projected to almost double by 2030.

Methods: From 1st March 2012 to 30th August 2012, data was collected on consecutive patients over 80 years old referred via the two-week referral pathway for suspected colorectal cancer. Data was collected on presenting symptoms, investigations and management.

Results: A total of 354 patients were included 256 patients (72%) were discharged after investigations revealed no pathology or a benign pathology 58 patients (16%) were discharged without any investigations (mainly not fit for investigation). None of these patients represented within the 1st year. 40 patients (11%) were diagnosed with colorectal cancer. 17 patients (43% of the malignancy cases , 5 % of all referrals) underwent resection, of which 4 patients died post operatively (mortality rate 24%). The remaining 23 patients had palliative treatment (57% of malignancy cases, 6% of all referrals).

Conclusion: High pick-up rate for colorectal cancer in this age group at 11%. Cancer resection rate was low at only 5% of all referrals and 43% of patients diagnosed with cancer. Mortality was high with a quarter of patients not surviving surgery. We recommend the design of a referral system which takes into account patients' fitness for bowel cancer surgery prior to urgent referral for exclusion of colorectal cancers.

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PROSTHETIC VALVE ENDOCARDITIS: A COMPLEX TREATMENT DECISION.

Knight C*
University of Bristol

A 71-year-old male with a bioprosthetic aortic valve replacement, pacemaker and bilateral knee replacements presents to A&E. He was mildly confused with slurred speech, muscle tremors, fever and joint pain on a background of being treated with amoxicillin by the GP. The history in conjunction with investigations indicated a diagnosis of acute kidney injury secondary to sepsis of unknown cause. However, on further investigation this looked to be due to infective endocarditis (IE) of both the aortic and mitral valves. No causative organism was found and the decision to continue with a medical management approach was made. IE and in particular prosthetic valve endocarditis (PVE) have a poor prognosis and management is very much down to clinical judgement. Therefore, this report discusses the merits of a combined medical and surgical approach as opposed to solely medical in the absence of definitive evidence based treatment guidelines. On admission, transoesophageal echocardiography showed no vegetations however two weeks later small vegetations were present on the aortic valve prosthesis and the mitral valve. The patient was treated using careful fluid resuscitation and started on a six week course of IV antibiotics. PVE presents difficulties in terms of diagnosis and management due to complications or extra cardiac manifestations. Very few multicenter, multinational and randomised control trials have been carried out on the treatment of PVE complicating a medical versus surgical treatment decision. A wider awareness of recommendations and implementation of protocols by NICE and individual hospital trusts needs to occur to aid clinical management of PVE. Whilst such protocols are no replacement for clinical judgement easier decision-making would be facilitated. Furthermore RCTs need to be conducted to create a larger and more reliable evidence base on which to base clinical decisions with the aim of reducing the high levels morbidity and mortality.

THE HOMELESS IN THE EMERGENCY DEPARTMENT - A CROSS SECTIONAL STUDY AT A LARGE METROPOLITAN NHS TRUST: THE EXTENT OF ALCOHOL DEPENDENCE AND PREVENTING MULTIPLE ADMISSIONS

Scholfield D*, Plant M, Murali K
University of Birmingham Medical School, United Kingdom

No recent studies exist on homeless patient presentations to emergency departments in the UK. The objective of this unique study is to identify common characteristics of regular attendees, in order to address wider health issues of the homeless. Patient records of 85 of the most recent attendees at Sandwell General Hospital and Birmingham City Hospital with “No Fixed Abode” were taken. Comparative data on the general population was extracted, for the same number of attendees in ED over the same time period. The mean age was 41 years, with 87% of homeless attendees being male and 13% female, in comparison to 53% male and 47% female in the general population. The most common presenting complaints were head injury (19%), intoxication (18%), psychiatric (9%) and seizures (9%). Only 2% attended for food or shelter; 61% directly involved alcohol and 10% drugs. The most common co-existing medical problems were alcohol dependence (21%), depression (7%) and epilepsy (5%). Regular alcohol use was recorded in 75% of patients and drug use in 16%, but only 5% were seen by a social worker. 50% presented more than once within a year, with 14% presenting over 10 times. 80% of repeat attendees had co-existing medical problems, with alcohol dependence being the most common. Alcohol use plays a major role in homeless attendance and readmission to the Emergency Department. Very few have contact with a social worker on attending ED, despite it being an ideal setting to address housing issues. To address the ‘revolving door’ nature of homeless attendees, an alcohol liaison service operating alongside social workers is a promising strategy that will be implemented to address alcohol use, referring homeless patients to community abstinence programmes to prevent the ‘revolving door’ nature of attendances.

AUDIT ON GROUP B STREPTOCOCCUS SCREENING UPTAKE AND SUBSEQUENT MANAGEMENT

Agius M P*
Mater dei Hospital Malta, Malta

Background: Group B Streptococcus (GBS) - Streptococcus agalactiae is an asymptomatic gram positive colonizer of the vagina and rectum that can be transferred to the fetus intra-partum. It is a major cause of early neonatal sepsis especially in pre-term or prolonged labour. Transmission can be prevented by intra-partum intravenous antibiotic prophylaxis – benzylpenicillin/ampicillin. Patients are not routinely screened in Malta.

Aim: To determine the uptake of GBS screening in a cohort of pregnant women between the months of June till August 2013, their subsequent management and whether this had any significant effect on neonates following delivery.

Method: A retrospective study of partially prospective data was carried out at Mater Dei Hospital. A cohort of 90 pregnant women between June and August 2013 were analysed on whether they were offered GBS screening with a high vaginal swab at the obstetrics out-patients, during their antenatal visits. Those screened were then selected and stratified according to status and the positive group studied for antibiotic treatment and any maternal or fetal complications. All patients delivered vaginally and were under the same consultant. Results: Out of 90 patients, 54 (60% of total) were screened and 7 (13% of those screened) were positive for GBS. Out of 7 women, 6 received antibiotics orally close to term or intra-partum intra-venous. No neonatal complications were reported during the patient's hospital stay (2-3 days).

Discussion: GBS screening rate is still low in Malta. The role of intra-partum antibiotic prophylaxis is significant in preventing neonatal complications. However, this deserves to be compared with the rate of GBS neonatal sepsis in neonates of untreated/unscreened women.

Conclusion: This audit showed that GBS colonisation is worth screening for. However, one needs to audit the disadvantages of screening (cost, anxiety) and subsequent treatment with intra-partum antibiotics (anaphylaxis, bacterial resistance and making labour less natural).

IDENTIFYING AMYLOID ß AND HYDROXYAPATITE IN DRUSEN

Ratu SGS*, Lengyel I
Institute of Ophthalmology, UCL & Bart's & The London, QMUL

Age-related Macular Degeneration (AMD), the leading cause of irreversible vision impairment in the Western world, is characterised by the formation of drusen. Drusen are heterogeneous deposits that form in the Bruch's membrane. Amyloid ß, amongst other proteins and lipids, has been detected in drusen in AMD. Dr Lengyel's group recently discovered the presence of insoluble hydroxyapatite (HAP) in drusen. HAP has the capacity to bind to proteins, amongst them amyloidß. HAP has the potential to become the seeding point for protein and lipid deposition and initiate drusen formation. I will determine the distribution and relationship between HAP and amyloidß deposition in human cadaveric eyes. This will provide valuable information in defining the molecular steps leading to the pathogenesis of ageing in the retina leading to disease such as AMD. To prove that there is a relationship between amyloidß and HAP I performed immunohistochemistry labelling and staining techniques on drusen and correlated this to the fluorescent labelling of HAP observed in drusen on sections from human donor eyes. Sections were viewed using LSM 700 confocal microscopy. Labelling flat mount sections with HAP dye and antibody 6E10 showed co-localization of amyloid ß spherules with HAP seen at the core of some of these ß spherules in some drusen. To the best of my knowledge, there is no current published research on the co-localization of amyloid ß and HAP, therefore the results obtained are insightful in the structure of drusen and the implications this may have on drusen biogenesis. The results of this project not only confirm the presence of amyloid ß and HAP in drusen but also show there is co-localisation of these two molecules. HAP cores are found in some amyloidß spherules in drusen. Thus implying HAP deposition may preceding step and cause of amyloid ß immobilization and accumulation in drusen.

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COMPLIANCE OF REQUESTING STOOL CULTURES AND FAECAL CALPROTECTIN IN INFLAMMATORY BOWEL DISEASE PATIENTS PRESENTED WITH ACUTE DIARRHOEA.

Ching R*, Murugesan S
Blackpool Victoria Hospital

Background: Concomitant Clostridium Difficile (C.Diff) infection in patients with Inflammatory Bowel Disease (IBD) is associated with increased hospitalization, use of vancomycin, colectomies and mortality.

Methodology: With standard set to 100%, we retrospectively audited our compliance of requesting stool cultures for IBD in-patients admitted to gastroenterology with acute diarrhoea. Factors of interest to us were the established diagnosis of patients, antibiotic use prior to acute admission, C Diff/ Glutamate Dehydrogenase (GDH) status and the percentage use of faecal calprotectin.

Results: 94 patients were identified between September 2010 and August 2013. Out of the 27 acute admissions patients, case notes from 18 were available. The mean age (SD) was 53.1 (21.2) years and male-to -female ratio was 11:16. Among all with IBD, 3 were coded as having ulcerative colitis, 1 remained unspecified. Acute flare up of IBD was responsible for 7 cases of acute admissions. The remaining were due to GDH positive diarrhoea (n=1), diverticulitis (n=1), gastroenteritis (n=6) and three were discharged with no known cause identified. We note from systematic review of case notes that no patient received antibiotics prior to admission or were considered as failed discharge. The compliance of patients that had at least one stool culture sent was 59% (n=16). Only 4 patients had 3 sets of stool cultures sent to exclude C.Diff. No patient nevertheless had had faecal calprotectin requested during their hospitalization.

Discussion: Clinical guidance from NICE suggested a minimum of one stool culture should be sent for adult in-patients admitted with acute diarrhoea. Our compliance to that is suboptimal. We note outcomes from published evidence that fecal calprotectin could indicate flare up and efficacy of treatment for IBD.

Conclusion: Improved compliance of requesting stool cultures and faecal calprotectin could positively influence our care of patients with acute diarrhoea secondary to bacterial origin.

THE USE OF THE NATIONAL EARLY WARNING SCORE (NEWS) IN AN OLD AGE PSYCHIATRY UNIT.

Rajyaguru P*
Frenchay Hospital, Bristol

Background: The National Early Warning Score (NEWS) was introduced in 2012 by the Royal College of Physicians to standardize acute illness assessment in all inpatient settings. Focusing on six individual physical observation parameters, a total score is created which provides an indication of illness severity and prompts appropriate clinical action. Recommendations are for weekly monitoring. This audit aims to identify the nature of NEWS usage in an old age psychiatry unit, determining if practice meets the recommended guidelines and to implement change where appropriate.

Methodology: Standards were based on local psychiatric hospital guidelines. Data was collected retrospectively using the NEWS charts (n=32 patients). Scoring frequency and accuracy over six weeks was assessed. A subsequent educational program of two weeks duration was delivered to staff and a NEWS Trigger-Sticker outlining recommended total score responses was designed and placed on each chart. This also served as a reminder to calculate the NEWS. The charts were then re-audited (n=27 patients).

Results: 28% of patients had weekly NEWS calculations, of which only 14% were correctly scored. The greatest error amongst incorrect scores was in relation to the respiratory rate. Post quality improvement - 72% of patients had weekly NEWS calculations of which 70% were correctly scored.

Discussion: Many psychiatry wards are separate from acute hospitals and lack medically experienced staff, thus use of the NEWS to aid detection of physical deterioration is particularly important. This is especially relevant as people with mental illness are at an increased risk of comorbidity. The importance of the NEWS to old age psychiatry as a speciality is also clear, given the frequency of comorbidities in the elderly.

Conclusion: This audit identified suboptimal scoring, putting patients at risk. Following cost-effective intervention the NEWS Trigger-Sticker in addition to further education has greatly improved scoring quality, benefiting patient safety in psychiatry settings.

AUDIT: INVESTIGATING THE PRE-IMPLANTATION COUNSELLING GIVEN TO PATIENTS BEFORE IUS INSERTION.

Ahmed N*
University of Manchester

Aims/Objectives: To establish whether patients at a general practice in Manchester are receiving high quality pre-implantation counselling in accordance with NICE guidelines. Is there a link between patients opting for early removal of the IUS and the quality of counselling they received?

Background: The intra-uterine system (IUS) is licensed as a form of contraception, to manage idiopathic menorrhagia and to prevent endometrial hyperplasia in patients receiving hormone replacement therapy (HRT). Despite its differing uses, the counselling patients receive before IUS insertion should be the same. Guidelines state this must include information regarding its mode of action, duration and efficacy, as well as possible risks and side effects.

Materials and methods: Patients who had the IUS inserted in the last two years were identified using EMIS. These patients' electronic records were retrospectively examined to see what counselling these patients had been given. This was compared to current NICE guidelines on IUS counselling.

Results, Summary/Conclusions: In total 29 patients were identified. 22 of these patients (76%) had received counselling which adhered to NICE guidelines. Of these 29 patients, 7 had had the IUS removed within a year of insertion (24%). No relationship was found between the patients who had the IUS removed early, and the quality of counselling that these patients received.

Findings were presented to the surgery and amendments to practice were suggested. These included using a template for all IUS counselling consultations, increasing the duration of appointments for IUS insertion and reminding doctors of the need for through documentation of all consultations. A teaching session regarding the IUS was also suggested. A re audit should be carried out every year to ensure that patients are being adequately counselled.

SIALOLIPOMA OF THE PAROTID GLAND- CASE REPORT AND REVIEW OF THE LITERATURE

Kanzara T*, Virk J, Al-Okati D, Owa T
Lister Hospital, Stevenage, United Kingdom

Objectives: To increase awareness of the rare presentation, diagnostic difficulties and management of sialolipoma of the salivary glands.

Materials and Methods: A review of the English literature was performed using MedLine. The main search phrase used was sialolipoma. Both primary and secondary sources identified from the search criteria were also reviewed.

Case Report: A 70-year-old Caucasian male with multiple co-morbidities presented with a painless lump over the right parotid gland which was gradually increasing in size over the preceding 5-6 months. There

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were no systemic symptoms or facial weakness. Imaging indicated a benign tumour of the right parotid. Superficial parotidectomy was performed and the histology revealed a sialolipoma.

Conclusions: Sialolipomas are rare neoplasms of major and minor salivary glands and should form part of the differential diagnosis of a salivary gland swelling. Preoperative diagnosis can be difficult which makes surgical excision the gold standard as it provides tissue for histological analysis.

UNDERSTANDING FOOD ALLERGY AND FOOD INTOLERANCE: THE PATIENT'S PERSPECTIVE

Brown A*
Guy's and St. Thomas' NHS Foundation Trust

Aims: The purpose of this exploratory study is to compare food allergy and intolerance, identify the extent to which these adverse food reactions (AFRs) compromise quality of life in individuals and to expand on the limited literature available in this area.

Hypothesis: Patients with food allergy will have worse health and lower quality of life but fewer mental health problems than patients with food intolerance.

Background: Food allergy and intolerance are distinct AFRs, which are more prevalent in developed countries and in women. Typical food triggers include fruit and nuts. AFRs cause reactions, ranging from mild skin reactions to severe anaphylaxis. Individuals need to be vigilant with their diet to reduce risk, which impacts on the individual in other aspects of their life. Studies show that the vigilance required, amongst other things can affect health and quality of life, however, the existing literature regarding this particular topic is extremely limited.

Methods: 31 new referrals to allergy clinics in the Guy's and St. Thomas' NHS Foundation Trust completed the self-report food allergy questionnaire, consisting of 7 validated measures of factors relating to AFRs and quality of life.

Results: Statistically significant differences between the two groups were not identified. However, the food intolerance group had approximately double the proportion of participants who qualified as likely cases of anxiety and eating disorders. Qualitative responses from participants suggested that they would appreciate more knowledge about their symptoms and how to manage them.

Conclusion: The results suggest that health and quality of life is compromised more in food intolerance patients. The findings highlight the need to expand on this study with a larger sample size, achieving larger effect sizes. Qualitative responses indicate the need for investigation into the improvement of support for those with AFRs to ensure implementation of a holistic care approach.

AUDIT OF HEADACHE ADMISSIONS REQUIRING LUMBAR PUNCTURES 2013

Shariff RER*
Stepping Hill Hospital, Stockport NHS Trust, United Kingdom

Background: Headaches are a common presentation in hospitals. Important causes of headaches include meningitis and subarachnoid hemorrhages (SAH), and lumbar punctures are often performed as part of the diagnostic work-up. At present, a Meningitis/SAH pathway exists to help with the acute management of headaches within the Stockport NHS Trust. This audit looks into the management of patients requiring lumbar punctures as per the Meningitis/SAH pathway, in relation to whether lumbar punctures were performed appropriately with adequate consent, information provision and clear documentation of each procedure, and whether adjunct investigations and treatment were provided, alongside lumbar punctures, within the appropriate time frame.

Methodology: Data was collected retrospectively, via case notes and electronic database systems, of patients above the age of 16, admitted with headaches requiring a lumbar puncture, between the 1/1/2013 to 30/6/13. Of the 116 patients identified, 55 case notes were selected randomly, of which 50 were eligible for further data collection and analysis.

Results: The audit identified poor outcomes from standards surrounding adjunct investigations and treatments performed, consent, information provision and documentation of procedures. There were inconsistencies surrounding initiation of antibiotics and/or antivirals, and on obtaining venous blood samples when indicated. There was a lack of awareness surrounding the need for written consent prior to performing a lumbar puncture, and a lack in standardized approach surrounding documentation of each lumbar puncture performed.

Discussion: Aside from education and creating awareness regarding adequate consenting, a lumbar puncture checklist was designed, post-audit, to help overcome problems surrounding documentation and illegible handwriting.

Conclusion: To rule out sinister causes of headaches, lumbar punctures can often proof essential in helping with diagnoses. However, it is without its own complications, and therefore obtaining formal consent and providing information to patients, as well as documenting them and the procedure itself is crucial.

MANAGEMENT OF HEAVY MENSTRUAL BLEEDING BY ENDOMETRIAL ABLATION TECHNIQUES. IS THERE SUCH A THING AS TOO MANY OPTIONS?

Barlow-Evans R*
Guy's and St Thomas' NHS Foundation Trust, Kings College London

Introduction: Heavy menstrual bleeding refers to significant menstrual blood loss over consecutive cycles affecting quality of life and is a common significant health problem in many pre-menopausal women. There are many identifiable causes but in up to 60% of patients no cause is identified.

Objective: To review and compare endometrial ablation techniques for the management of heavy menstrual bleeding. Design: Literature review.

Summary Points: Traditional first line therapy was medical treatment, however, this is frequently unsuccessful or of limited benefit. Until recently the only surgical option was hysterectomy which is effective but invasive, extreme, expensive and carries a greater risk of complications. Since the 1990s the number of hysterectomies has decreased due to increasing utilisation of alternative methods such as the Mirena intra-uterine system and endometrial ablation techniques. There are two main categories of endometrial ablation. First generation techniques require hysteroscopic visualization of the uterus and include: transcervical endometrial resection, rollerball endometrial ablation and hysteroscopic laser ablation. Whereas second generation techniques are non-hysteroscopic and include: thermal balloon technology, microwave endometrial ablation, hydrothermablation, monopolar and bipolar radiofrequency ablation, cryotherapy, diode lasers and photodynamic therapy.

Conclusion: Treatment of menorrhagia has improved over the last 20 years and continues to do so. Comparison of the literature reveals that first generation techniques take, on average, fifteen minutes longer to perform and second generation techniques were more often performed under local anaesthesia, carry less risk of uterine perforation, haematoma development, cervical lacerations or fluid overload. However, there is no significant difference between the techniques in terms of rates of amenorrhoea or patient satisfaction. However, this progress has led to an increase in the range of treatment options available with no clear indication regarding the most effective method. A more defined guideline of recommended endometrial ablation techniques would likely improve patient care and satisfaction.

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AN ATYPICAL PRESENTATION OF DIABETIC KETOACIDOSIS IN A TYPE 2 DIABETIC TRIGGERED BY CATASTROPHIC SMALL BOWEL INFARCTION.

Herbert A, Wood F*, Koh C
Royal Preston Hospital, United Kingdom

This case report describes an atypical presentation of diabetic ketoacidosis (DKA) in a type 2 diabetic, triggered by small bowel infarction. It emphasises that DKA is not a disease solely of type 1 diabetics, and highlights the necessity for a low threshold of suspicion for significant precipitants, as well as an appropriate investigative search. A 73-year-old male presented to A&E with confusion and general malaise for 2 days. Examination was largely unremarkable apart from a GCS of E1 V2 M5. Blood tests revealed glucose 53.1mmol/L, hyponatraemia, hyperkalaemia, acute kidney injury, bicarbonate 8mmol/L, pH <7.2, ketonaemia >3.0mmol/L and lactate 6.2mmol/L, meeting the diagnostic criteria for DKA but with a mixed ketotic and lactic acidosis. There was no clear trigger for DKA and he was treated for presumed sepsis. He was transferred to critical care for ongoing management. Blood ketones and glucose improved but the lactate level and GCS did not. 12 hours later his abdomen became acutely distended and guarded to palpation. An abdominal CT showed extensive small bowel infarction, likely secondary to superior mesenteric artery calcification and occlusion, with mesenteric and portal venous gas. Unfortunately this was deemed non-survivable and the patient died.

Summary: This is an important case highlighting the existence of DKA in type 2 diabeties. Here, a mixed ketotic and lactic acidosis was the first indication of significant and catastrophic visceral infarction. Clinicians require a low threshold of suspicion for significant pathology and an intensive search for the cause when is not immediately obvious.

PRE-PRANDIAL INSULIN ADMINISTRATION IN INPATIENTS WITH DIABETES

Haider R, Homer A*, Mutch J
Norfolk and Norwich University Hospitals NHS Foundation Trust

Background: The National Patient Safety Agency recommends systems are in place to enable hospital inpatients to self- administer insulin where feasible and safe. All rapid and intermediate acting insulin's have a specific timeframe in which they should be taken prior to a meal to optimise glycaemic control in patients with diabetes. The individual timeframe is set by the manufacturers and stipulated in the summary of product characteristics.

Methodology: A sample size of 29 insulin dependant diabetic patients was obtained from 29 medical wards at the Norfolk and Norwich University Hospital between 12th and 19th November. Wards in which patients were admitted for 24 hours or longer were included. Each eligible patient recorded the exact time of their meal and when they received their insulin in a data collection questionnaire over a 24 hour period. Results 87 meals were analysed. Insulin was administered outside the manufacturers recommended time for 47 (56%) meals. 41% of patients had their Insulin administered by a nurse during their hospital stay, whilst 59% self-administered. The average delay in administration was 10 minutes, however by 30 minutes, all patients had received their Insulin. Nurses were accountable for 62% of meals administered outside the recommended time, and patients responsible for 53%.

Discussion: Findings show a poor compliance in administering Insulin within the manufacturers SPC recommend times. Self-administering patients showed greater adherence to meeting this standard, compared with nurse led Insulin administration. Results show a clear inclination towards self-medicating, however majority of patients were frustrated at being unable to freely access their insulin prior to meals.

Conclusion: Improved education in the timely administration of insulin is required amongst nurses. A strict selection criteria is necessary to allow nurses to carefully select in patients in whom self-administration would be a safe option, and thus reduce the likelihood of insulin related medication errors.

A CRITICAL REVIEW OF CURRENT PROPHYLACTIC USE OF ONDANSETRON AND CYCLIZINE FOR POSTOPERATIVE NAUSEA AND VOMITING (PONV) IN DAY-CASE GYNAECOLOGICAL SURGERY.

Trounce J*
Torbay Hospital

Background: Postoperative nausea and vomiting (PONV) is a significant problem for both patients undergoing day-case surgery, and their clinicians, leading to distress, poor patient satisfaction and in some cases, delayed discharge or unplanned admission. PONV is more common in certain procedures such as gynaecological surgery, yet the optimal treatment strategy remains unclear. Many patients at Torbay Hospital receive prophylactic anti-emetics prior to surgery, potentially exposing 'low risk' patients to unnecessary medication side-effects and increasing hospital expenditure.

Methodology: 30 patients undergoing day surgery in Torbay completed a questionnaire just prior to their procedure, enabling an assessment of patient concerns.

Results: The results of the survey showed that the biggest concern for 52% of patients was PONV, with women worrying more about this than men. This suggests that for 48% of those undergoing surgery, PONV is of little concern and therefore the prophylactic treatment of low-risk patients may be unnecessary.

Discussion: Research suggests ondansetron and cyclizine work better in combination than alone. The routine use of the British Association of Day Surgery (BADS) PONV calculator as a screening tool would enable individual assessment of PONV risk and identification of low and high-risk patients prior to surgery. If low-risk, anti-emetics could be given on a 'need to treat' basis, focusing on non-pharmacological methods of reducing PONV. A randomized-control-trial based on this would prove beneficial; however the ethical implications of withholding prophylactic anti-emetics are an important consideration.

Conclusion: When considering prophylactic treatment of PONV, the BADS PONV calculator may assist in assessing individual patient risk and preference. A large-scale survey focusing on patient preference would be a useful tool to direct further research.

IMPACT OF EDUCATION ON LIFESTYLE, WORK CONDITIONS AND GENERAL HEALTH

Skuja V*, Straume Z, Vilcane S, Lejnieks A
Riga East Clinical University Hospital, Latvia

Background: It is assumed that better educated people should make smarter lifestyle decisions, have better work conditions and therefore have better health. The aim of the study is to determine: Are better educated peoples' lifestyle healthier? Do better educated people have better work conditions? Are better educated people healthier?

Material/ Methods: Cross-sectional study in corporate environment, 290 workers, 50% executives and 50% employees. Interview, measurements. SPSS - independent sample t-test and chi-square test.

Results: 88% executives and 65% employees have higher education. Better educated people smoke 2.22 pack years less ($p=0.048$), consume 0.64 drinks less ($p<0.0001$) and 23% of them eat healthier ($p<0.0001$) than workers with lower education. They work 1 hour less each workday ($p=0.005$), but their stress level is 15% higher ($p=0.001$), they sit 43 minutes longer each day ($p=0.045$) and 82% bring their work to home ($p<0.0001$) more frequently than workers with lower education. Better educated people evaluate their health as high, feel as healthy and have the same amount of complaints about their health as people with lower education.

Discussion: When searching PubMed database - education and employment is mostly connected with psychoemotional work conditions or specific medical conditions. This is the only scientific paper concerning education, employment and general health issues.

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Conclusion: Although better educated people live healthier lifestyle, they have more stressful work conditions and therefore are not healthier although equally healthy as people with lower education. This proves that stressful work conditions are exactly as bad as unhealthy lifestyle – smoking, consuming alcohol and unhealthy diet put together. If people live unhealthy lifestyle and have stressful work conditions a great deal of health damage can be caused regardless of their education.

SUDDEN ARRHYTHMIC DEATH SYNDROME (SADS): DIAGNOSTIC YIELD OF COMPREHENSIVE CLINICAL EVALUATION OF PAEDIATRIC FIRST-DEGREE RELATIVES.

Hendry J*, Giudici V, A Spanaki, Mead-Reagan S, Field E, Abrams D, Lowe M, Pablo KJ
University of Edinburgh, United Kingdom

Background: Sudden arrhythmic death syndrome (SADS) describes the sudden death of a previously healthy individual, with no cause identified on post-mortem. A large proportion of SADS cases are thought to be attributable to inherited cardiac disease. Previous studies of adult populations, have identified evidence of a heritable cardiac condition in up to 53% of families. However, prevalence data within paediatrics is more limited. The aim of this study was to determine the yield of extensive clinical screening in children attending Great
Ormond Street Hospital, referred due to a history of SADS or aborted cardiac arrest (ACA) in a first-degree relative.

Methods: Retrospective evaluation of children attending family screening after sudden cardiac death or ACA in a family member was performed and strict inclusion criteria employed. Comprehensive assessment of patients included clinical examination, family history, electrocardiogram, echocardiogram, 24-hour tape and signal averaged electrocardiogram; older children also underwent exercise testing, cardiac MRI and ajmaline-provocation test.

Results: The study included 110 children in total from 63 families. In 10 children from 9 families, an inherited cardiac disease was diagnosed (14.3%). Specifically, 7 patients were diagnosed with Brugada Syndrome, 2 with Long QT Syndrome and 1 with catecholinergic Polymorphic Ventricular Tachycardia.

Conclusion: The results demonstrate a high prevalence of heritable cardiovascular disease after screening of children at risk due to a history of SADS in first-degree relatives. This emphasises the importance of ongoing screening in this population, to ensure early diagnosis, appropriate management and prevention of sudden cardiac death.

AN AUDIT TO ESTABLISH THE CURRENT MONITORING STANDARDS OF HYDROXYCHLOROQUINE IN PATIENTS WITH RHEUMATOID ARTHRITIS

Nathan J*, Mitton K, Teh LS
Royal Blackburn Hospital, United Kingdom

Background: Hydroxychloroquine is considered a disease-modifying anti-rheumatic drug (DMARD) because it can decrease the pain and swelling of arthritis and it may prevent joint damage and reduce the risk of long-term disability. It often is used for mild rheumatoid arthritis or in combination with other drugs for more severe disease.

It is well acknowledged that there are rare but devastating visual complications associated with the medication and close monitoring of this is advised. Local guidelines advise the reduction of dose of hydroxychloroquine within three months of commencing the medication. Baseline renal and liver function blood tests and every 6 months thereafter are recommended along with an initial screening by an optician and every year subsequently.

Results: A total of 46 patients (33 male and 13 female) were included but 6 were excluded as they had been on hydroxychloroquine for less than 6 months. Only 10% of patients had their dose calculated according to their lean body weight and 13% had it reduced after 3 months. An ophthalmology history, performance of visual acuity and fundoscopy at commencement of hydroxychloroquine was poorly performed, 8%, 10% and 5% respectively. However 100% of patients who experienced visual symptoms after starting treatment were referred to an ophthalmologist and of those 67% stopped taking hydroxychloroquine immediately. Only 7% of patients receiving treatment for more than 5 years were referred to an ophthalmologist.

Conclusions: Despite recommendation from local guidelines the reduction of dose after 3 months of hydroxychloroquine is rarely performed. Visual assessment is not routinely performed and patients are overall aware of the complications that can occur and when they should stop taking their medication. The findings of the audit will be presented locally to the multi-disciplinary rheumatology team in order to improve care of these patients. There needs to be improved communication between the hospital staff, patient and their local optician at commencement of hydroxychloroquine and to ensure appropriate investigations and management are performed at initiation and whilst taking hydroxychloroquine. We aim to re-audit in a year's time.

A PROSPECTIVE AUDIT ASSESSING THE RATE OF POLYPHARMACY IN CARE HOME RESIDENTS

Bigwood N*
Musgrove Park Hospital, Taunton, Somerset

Background: The presence of polypharmacy (5+ medications) is common among care home residents. Reducing the number of medications taken lowers the risk of adverse drug reactions.

Methodology: Participants from five residential/nursing homes (n=43) all registered with a single General Practice were assessed for polypharmacy using guidelines from NHS Scotland (topical treatments and supplements excluded). Possible medications to discontinue were identified and discussed with the participant/relative and their General Practitioner. A teaching session reviewing national guidelines with General Practitioners was undertaken. Medications were re-evaluated six months later and compared with medications of newly registered participants from the same care homes to determine if prescribing habits had changed.

Results: 74% of participants were identified with polypharmacy with an average of seven medications - one less than international data. After a review of prescribed medications, the rate dropped to 61%, and the average number of medications fell to six. The most common medications stopped were folic acid, aspirin and zopiclone. The re-audit rate of polypharmacy in existing participants was 59%; however, the rate for new participants (n=15) was 80%, which paralleled the initial medication audit (prior to intervention).

Discussion: The initial rate of polypharmacy was lower than international data, suggesting prescribing practices were reasonable. The further reduction in average medications suggests a focused review of prescriptions is effective. The re-audit showed new participants had a similar rate of polypharmacy to those in the initial audit, suggesting the teaching session did not alter prescribing practices.

Conclusion: Initial rates of polypharmacy were lower than described in international data, and the use of national guidelines allowed a further reduction. Although rates remained static on re-audit, new participants had similar rates of polypharmacy to the pre-audit cohort, suggesting further work needs to be undertaken when patients first register.

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ADHERENCE TO LEEDS TEACHING HOSPITALS URINARY TRACT INFECTIONS (UTI) GUIDELINES AUDIT

Brown A*
St James University Hospital, United Kingdom

Background: A standards-based clinical audit into the compliance of antimicrobial prescribing in patients in the medical admission unit at St James' University Hospital, where the diagnosis/reason for antimicrobial prescription was 'urinary tract infection' (UTI). The purpose was to investigate how many patients being treated for UTI had had signs and symptoms of UTI, how many had had a urine dip positive for nitrites/ leukocytes and how many had had samples sent for microscopy cultures and sensitivity (MC&S), in accordance with hospital guidelines.

Experimental design and/or methods used: A review of clerking notes and prescriptions for all (15) patients over 5 days in March 2013, where antibiotic treatment was given on the basis of 'UTI', on medical admissions ward.

Results: 80% patients had at least one sign or symptom of a UTI. 33% patients in the sample had no record of a urine dip being done. Only 60% of patients being treated for UTI had a urine dip positive for nitrites/ leukocytes. For all patients with a nitrite/leukocyte positive urine dip, MC&S samples had been requested. 20% of these samples were rejected due to inadequate labelling, one sample was not sent. Therefore only 47% patients on antimicrobials for UTI had had a urine sample sent for MC&S.

Conclusion: We often treat infection empirically if we are unable to obtain urine samples. However, we should be aiming to direct antimicrobial treatments as accurately as possible, for reasons of patient care, increasing microbial resistance and cost.

THE RELIABILITY OF 3DMD PHOTOGRAMMETRY AS A FORM OF INDIRECT ANTHROPOMETRY, WITHIN CRANIOFACIAL SURGERY

Moori P
Univeristy of Liverpool, United Kingdom

Background: Planning of craniofacial procedures requires precise collation of volumetric cranial dimensions. Development of surface anthropometry is valued in the modern world of surgery, where manual use of calipers is commonly used. 3dMD photogrammetry allows radiation free and fast imaging. Advantages of 3D photogrammetry compared with direct traditional methods prove futile without evidence of the systems accuracy, precision and reliability to collate measurements. Limited studies compare 3dMD systems with direct anthropometry, a key motivation of our review. This review will draw emphasis to anthropometric studies, focusing on the reliability of 3D photogrammetry as a form of indirect anthropometry. A refined database search was conducted using Web of Knowledge/Web of Science. 24 articles were yielded with only 3 relevant to this review.

Discussion: The 3dMD Systems achieve 360-degree images of a subject, allowing accurate documentation cranial geometry. High-speed capture eliminates motion error, ideal for paediatric imaging. Patients remain in an upright position, eliminating soft tissue draping, often seen from supine computed tomography and cone beam systems. Results showed an average error linked with landmark positioning as sub- millimeter and statistically insignificant, concluding that 3dMDface system is highly accurate. Findings from one study recognized 17 out of the 18 direct measurements obtained related greatly to the digital values acquired (mean r = 0.88). The conclusion was that the digital measurement using 3dMD were reliable and as precise. .

Conclusion: 3dMDface system, establishes respectable covenant with the traditional methods of direct anthropometry. In most cases results of the 3dMDface system demonstrated a higher level of precision, with labeling errors being statistically insignificant. The outcomes on accuracy, reliability and precision provide reliable unbiased evidence to suggest that 3dMDface system, as a form of indirect anthropometry is reliable. The reliability of 3dMD systems could play a potentially key role in patient reported outcome measures.

DELIRIUM AND THE ENVIRONMENT IN AN ELDERLY HOSPITAL POPULATION

Smith A D*, O'Mahony S
University Hospital Llandough, United Kingdom

Introduction: The burden of delirium among hospitalised patients is significant. Particularly among the elderly, who as a result have an increased morbidity and mortality. The National Institute of Clinical Excellence (NICE) recommends the provision of environmental cues to prevent or manage delirium. This audit assessed the adherence to these guidelines.

Methodology: Clinical audit assessing the environment of 60 inpatients in care of the elderly wards at University Hospial Llandough (18/03/2013 to 28/03/2013). Factors assessed included positioning of patient within ward (main versus side ward), mobile versus bed bound and number of bed moves. Patient's environment was assessed for the presence of a visible clock, date (whether this was correct) and adequate light provision. The presence of cognitive impairment or delirium was assessed.

Results: 23 (38%) patients had known dementia, 21 (35%) were admitted with delirium. 56 (93%) patients had a visible clock, 26 (43%) had the date visible which was correct in 20 (77%) cases. 56 (93%) patient's had adequate light provision The average number of bed moves among all patients was 1 23 moves. Of those with cognitive impairment 29 (85%) patients had a visible clock, 17 (50%) had the date visible of which 13 (76%) were correct. 31 (91%) patients had adequate light provision.

Discussion: The provision of certain environmental cues was inadequate, particularly for patients with known cognitive impairment. Orientating patients is a low cost approach to managing delirium. Particularly when comparing this with the cost of morbidity and mortality associated with delirium.

Conclusion: This audit recommends: 1) All patients with delirium should be well orientated with a visible clock and date which should be correct. 2) Additional effort needs to be made in reducing the number of bed moves in patients with delirium. 3) Adequate light provision should be provided for all patients.

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