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Dr Peter Trewby

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Proceedings of the Association of North of England Physicians

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…where High Flow Nasal Cannula was used as primary respiratory support, 75% avoided invasive ventilation…

Abstracts of the meeting held on Wednesday 8th November 2017 at Freeman Hospital

HOW DO TANZANIAN TRADITIONAL AND FAITH HEALERS UNDERSTAND AND MANAGE TERMINAL ILLNESS?

Naomi Higton, Richard Lee, Grace Lewis, Richard Walker, Leila Onriki, Anna Massawe, Sarah Urassa
Newcastle University, Northumbria Healthcare Trust, Kilimanjaro Christian Medical Centre

Palliative care (PC) need in Africa is projected to rise by 300% over the next 20 years. Late presentation and poor community awareness of services are recognised challenges to effective healthcare delivery. Traditional and Faith Healers (TFH) hold cultural importance, and provide a significant proportion of primary healthcare in Africa. This project sought to explore their understanding and management of terminal illness and death, with the aim of improving PC delivery through collaborations between TFH and allopathic services. Data were collected through semi-structured qualitative interviews with Traditional Healers (n=11) and Faith Healers (n=8) working within the Kilimanjaro region of Tanzania. Participants were recruited through convenience and purposive sampling. Interviews were audio-recorded and translated transcripts analysed by Thematic Analysis. All TFH had experience of terminally ill and dying patients. Participants had a holistic approach to healthcare, with themes of biological, psychological, social and spiritual factors identified throughout conceptualisation and management of both terminal illness and death. This also informed opinions towards collaboration, seeing healthcare professionals and TFH holding different roles within these areas.
Conclusions: The overlap with allopathic explanatory models of health (i.e. the BioPsychoSocial model) provides positive grounds for future collaborations. TFH could complement allopathic PC services through culturally acceptable spiritual care, perceived to be lacking in hospitals. Joint dialogue and education between practitioners is necessary to begin collaboration. A significant challenge to joint dialogue is mistrust between Traditional Healers and Faith Healers. The findings merit further research into patient's preferences and experiences of Traditional and Faith Healers in terminal illness.

MYELOMA UNMASKED BY ENDOSCOPIC VASCUAR ANEURYSM REPAIR

K Smith-Jackson, J Willows, A L Brown
Freeman Hospital, Newcastle Upon Tyne Teaching Hospital

A 75 year old man presented for elective endoscopic vascular aneurysm repair of an asymptomatic 90 mm abdominal aortic aneurysm. No immediate complications were encountered and he was discharged on day 2. However, on discharge he had stage 1 acute kidney injury (AKI) with his serum creatinine having risen to 135 umol/L from a baseline 95 umol/L. Nine days later he presented to hospital uraemic and anuric and required haemodialysis. The differential diagnoses were blocked renal artery, contrast induced nephropathy or cholesterol emboli. Further investigations showed an abnormal serum free light chain ratio. A renal biopsy showed myeloma cast nephropathy and bone marrow trephine showed 10-15 % plasma cells (diagnostic threshold of myeloma >10%). He was commenced on steroids and bortezomib. His 'smouldering myeloma' was only unmasked in the post-operative period probably due to precipitation of the serum free light chains in the context of intra-arterial contrast and volume depletion. He responded well to treatment and recovered enough residual renal function to discontinue dialysis.
Conclusion: This case highlights the high index of suspicious required for myeloma and its varying spectrum of disease.

EVALUATING THE SENSITIVITY AND SPECIFICITY OF THE B-FIT, A FRAILTY SCREENING TOOL FOR USE IN TANZANIA

Louise Whitton, Grace Lewis,. Richard Walker, Keith Gray, Catherine Dotchin
Northumbria Healthcare NHS Foundation Trust and Kilimanjaro Christian Medical Centre

The Brief Frailty Instrument for Tanzania (B-FIT) is a frailty-screening tool that was developed for use in Tanzania where widespread use of the gold-standard Comprehensive Geriatric Assessment (CGA) is impossible due to limited resources. The B-FIT consists of a disability questionnaire and a screen for cognitive impairment. We assessed the sensitivity and specificity of the B-FIT, when compared to the CGA. 567 people aged 60 years, from the Kilimanjaro region of Tanzania, were screened using the B-FIT. A sample, stratified by B-FIT score then had a CGA carried out by a blinded, UK-trained doctor. The two were compared using area-under-operating-characteristic (AUROC) analysis and the B-FIT's components were assessed using regression analysis. The B-FIT demonstrated an AUROC value of 0.861 (95% CI, 0.790-0.932). The original cut-point had a sensitivity of 0.395 and specificity of 0.978, but using a lower cut-point improved this to 0.744 and 0.859 respectively. Regression analysis suggested a lower weighting for the disability component of the B-FIT and this increased the AUROC value to 0.872 (95% CI, 0.805-0.940).
Conclusion: The B-FIT has a high sensitivity and specificity when a lower cut-point is used. Weighting the disability component lower may slightly improve the sensitivity and specificity.

VASCULITIS AND CAUTIONARY ACUTE KIDNEY INJURY TALES

J Willows, K Smith-Jackson, A Brown
Freeman Hospital, Newcastle

Case notes of 4 patients who presented to the Freeman renal ward with acute, progressive AKI due to small vessel vasculitides were selected because of diagnostic delay to glean retrospective learning points from their presentation. The review revealed that one patient had presented acutely to their local DGH, and subsequently underwent large panels of negative investigations prior to eventual diagnosis and

transfer, including invasive tests such as OGD and colonoscopy. One patient had presented to primary care, but had a significant delay prior to having phlebotomy performed. One patient had a more grumbling course, and had presented to primary care and ENT many times, and had had unsuccessful ear surgery due to misdiagnosis prior to diagnosis. The final patient had been seen by the renal team while an inpatient with AKI – and still the diagnosis had been missed.
Conclusion: Though rare, small vessel vasculitides should be included in the differential diagnosis of a range of presentations, especially given that the diagnosis in AKI is a medical emergency. Had urinalysis been performed as part of a initial clinical examination it may have led to earlier diagnosis. Urinalysis should be performed not only in all cases of AKI but also in any unexplained, multi-system disease.

THE IMPACT OF ACUTE STROKE SERVICE CENTRALISATION: A TIME SERIES EVALUATION

Mat Elameer, Darren Flynn, Chris Price, Helen Rodgers
Newcastle University, Northumbria Specialist Emergency Care Hospital, Cramlington

Three acute stroke units serving a large urban and rural population in North East England were centralised into a single hyperacute stroke unit in June 2015. Our objective was to evaluate the impact of centralisation of acute stroke services upon mortality, dependency, length of stay and times to admission, brain imaging and thrombolysis for all acute stroke patients admitted between 1 April 2013 and 31 March 2016 (N=2,734). We undertook an interrupted time series evaluation using routinely collected data from the national stroke audit programme. Centralisation was associated with improvements in dependency as measured by median modified Rankin Scale at discharge (-0.07 points/month [95% CI: -0.13 to -0.01]) and mortality (-0.89%/month [95% CI: -1.72 to -0.06]). Time from stroke onset to thrombolysis shortened by 38.50 minutes [95% CI: -69.32 to -7.68]. Time from admission to brain imaging for patients who received thrombolysis shortened by 14.90 minutes [95% CI: -24.97 to -4.84]. Time from stroke onset to hospital admission, and length of stay were unchanged.
Conclusion: Centralisation of acute stroke units was associated with statistically significant improvements in stroke mortality, dependency and stroke-onset-to-thrombolysis treatment times.

POST SURGICAL TAVI CARE AND IMPACT OF A TAVI NURSE ON QUALITY OF CARE

Muhammed Iqbal, Douglas Muir
James Cook University Hospital, Middlesborough

Transcathether Aortic Valve Replacement or Implantation (TAVI) has become the standard of care for those patients with severe aortic stenosis who cannot undergo surgical valve replacement. James Cook University Hospital was the first UK institution to perform this procedure in 2009. The numbers of TAVI cases has increased to over 100 per year from a previous figure of almost 60 cases while keeping the number of CCU staff same. A separate TAVI nurse has been employed full time providing care to TAVI patients since October, 2016. The object of our audit was to identify if there was any effect on the quality standards due to increased numbers of cases and to assess the impact of TAVI nurse. 5 quality standards (Daily ECG, Cardiac monitoring, Echo, U&Es and puncture site) were selected and the data was compared for 30 patients to previous cycle done in 2013 to notice any change in care provided.
Conclusion: The results showed that 3 of the 5 quality standards were not met but noticed overall improvement from previous years. This audit provides a good example that involvement of a specialist nurse can improve the delivery of care even when the patient numbers are increased by 50%.

HIGH FLOW NASAL CANNULA: REAL WORLD EXPERIENCE ON A CRITICAL CARE UNIT.

Tedd HM, Conroy K, Curtis H.
Queen Elizabeth Hospital, Gateshead.

High flow nasal cannula (HFNC) is a new method of delivering up to 60l/min of oxygen, but little data exists about its use outside of clinical trials. We assessed the frequency of use of HFNC on the critical care unit. 13.2% of patients admitted to critical care required HFNC. We reviewed 50 patients treated with HFNC. Their mean age was 63.1 years (27 – 92 years). The commonest precipitant of respiratory failure was pneumonia (66%). 80% of patients were treated with HFNC as primary respiratory support, whilst in 20% it was used in the post-extubation setting to prevent re-intubation. In patients using HFNC as primary respiratory support, 75% did not require invasive ventilation. 62.5% required no other organ support. 80% of patients treated with HFNC survived to discharge from critical care with no documented adverse events.
Conclusion: HFNC is being used safely and successfully on our critical care unit. In those patients where HFNC was used as primary respiratory support, 75% avoided invasive ventilation and 62.5% required no other organ support. This highlights a subset of patients who may be managed on a ward setting with HFNC provided other organ dysfunction does not co-exist.

SIMS CHECKLIST – A WARD BASED DAILY BRIEF/DEBRIEF TOOL

Kate Foster, Mark Shipley
South Tyneside District Hospital

The use of checklists in medical scenarios, for example the surgical safety checklists introduced in 2008 by WHO, can significantly improve patient safety as well as team communication and dynamics. At present there is no similar recommendation in the medical ward setting.
The SIMS Checklist (Service Information Management System) aimed to improve team communication between medical staff on ward leading to enhanced patient care. The

checklist was created covering keys areas including basic introductions, to confirm all team members were known and individually aware of their role for the day; highlight urgent tasks including investigations that needed requesting or outstanding results; and ensure all members of the team were aware of the senior support available. The checklist was trialled for four months before evaluation. At evaluation, 100% of staff felt it led to improved organisation, team morale and opportunity to raise any concerns. Most members of staff felt the checklist helped to ensure teaching sessions were attended; roles and responsibilities were known patient safety improved.
Conclusion: Overall the SIMS checklist had a positive outcome and significantly improved team communication, organisation and patient safety.

ACCEPTABILITY AND EFFECT OF GROUP EXERCISE FOR PATIENTS WITH OSTEOPOROSIS AND VERTEBRAL FRACTURE ON POSTURE, STRENGTH, BALANCE AND FUNCTIONAL MOBILITY.

Gavin Snelson, Liz Flynn, Sharon Abdy, Verity Woodhall Terry Aspray
Freeman Hospital Newcastle

Patients with osteoporosis frequently experience vertebral fracture which leads to increased kyphosis and height loss causing significant pain. Pain can affect patient's confidence and ability to exercise leading to worsening strength, posture, balance and cardiovascular fitness. Specialist physiotherapy and education for this group are rare. A convenience sample of patients was recruited from secondary care osteoporosis clinics who met the inclusion criterion. Patients were enrolled in group based exercise with a specialist physiotherapist attending once a week for 8 weeks. Patients spent 3 minutes at each exercise station comprising postural, strengthening, balance and cardiovascular exercises. Sessions consisted of a 10 minute warm up followed by eight stations and a 10 minute cool down. Exercise was followed by educational advice on lifestyle, bone medications and exercise. 122 patients were enrolled. 66 completed all 8 sessions giving a drop-out rate of 46%. This was comparable to other exercise interventions such as pulmonary rehabilitation.
Improvements were found in posture (tragus to wall test $p<0.003$), grip strength (JAMAR grip strength tester $p<0.04$) balance (turn 180º $p<0.001$) and cardiovascular fitness (6-minute walk test $p<0.01$).
Conclusion: The completion rate for group based exercise is comparable to other exercise groups. Significant improvement was noted in many areas confirming that patients with osteoporosis and vertebral fractures have the potential to benefit from group exercise.

PREDICTING DRUG-FREE REMISSION IN RHEUMATOID ARTHRITIS – RESULTS FROM THE BIOMARKERS OF REMISSION IN RHEUMATOID ARTHRITIS (BIORRA) STUDY

Kenneth F. Baker, Arthur G. Pratt, Andrew Skelton, Dennis Lendrem, Ben Thompson, John D. Isaacs
Newcastle University and Newcastle upon Tyne Hospitals

The use of disease-modifying anti-rheumatic drugs (DMARDs) in modern treat-to-target strategies has made remission a realistic and achievable target for many patients with rheumatoid arthritis (RA). However, DMARDs carry potential risks of serious adverse effects and require inconvenient and expensive regular safety monitoring. Recent studies have demonstrated that up to half of patients with RA in remission can stop DMARDs without a subsequent flare of arthritis but cannot be reliably predicted. We aimed to identify biomarkers that can predict drug-free remission (DFR) and flare following withdrawal of DMARD therapy. Patients with established RA who satisfied clinical and ultrasound remission criteria were enrolled in a six-month prospective interventional study of complete conventional synthetic DMARD cessation. The primary outcome was time-to-flare, defined as DAS28-CRP ≥ 2.4. Baseline clinical and ultrasound parameters, circulating cytokines, and peripheral CD4+ T cell transcriptional profiles were assessed for their association with flare by Cox regression modeling and receiver-operating characteristic analysis. Of the 44 patients who discontinued DMARDs, 23 (52%) experienced an arthritis flare at a median (IQR) of 48 (31.5 – 86.5) days following DMARD cessation. A composite score incorporating five baseline variables (three genes, one cytokine and one clinical) differentiated future flare and DFR with an area under the ROC curve of 0.96 (95% CI 0.92-1.00), sensitivity of 0.91 (0.78 – 1.00) and specificity of 0.95 (0.84 – 1.00).
Conclusion: Our study provides insight in to the pathogenesis of RA flare and, if successfully validated in an external cohort, could hold promise in guiding DMARD withdrawal in patients with RA in remission.

AUDIT INTO MANAGEMENT AND OUTCOMES OF ACUTE KIDNEY INJURY (AKI)

Jonathan Chernick, Shalabh Srivastava
South Tyneside NHS Foundation Trust, City Hospitals Sunderland, Institute of Genetic Medicine, Newcastle University

Acute Kidney Injury (AKI) leads to increased morbidity and mortality. We retrospectively assessed outcomes for patients with AKI in community and hospital settings, observing length of hospital stays, mortality and associated risk factors. The data created a 'snapshot' of outcomes, before development of our new nephrology outreach

service at South Tyneside Foundation Trust (STFT). Eighty-two discrete episodes of AKI were analysed. Severe AKI was associated with longer inpatient stay (20.2 days vs 11.9 days for over 65s). CKD Staging had little association with AKI mortality. Most severe cases of AKI developed in the community. The use of medications such as diuretics, ACE-inhibitors and A2RBs was associated with worse outcomes and higher mortality for community AKIs.

Conclusion: As a result of this audit we aim to educate hospital and primary care staff on the early detection and management of Acute Kidney Injury. We have initiated a new nephrology clinic at STFT where all patients admitted with severe AKI are followed and drugs (eg. ACE-I and ARB) conferring long term prognostic benefit can be reinitiated. We will repeat the audit this year.

Association Business

Date of next meeting: 14 March 2018 6.00 pm Freeman Hospital. Subsequent meetings will be on 11th July and 7th of November 2018**.**

The meetings will take place after the GIM teaching. The format will remain unchanged with 9 slots for oral abstracts and 6 for poster presentations. There will be a free buffet meal to allow posters to be inspected and concentration to be maintained! Please do come and encourage your juniors to come after the GIM teaching.

The meeting is **approved for 3 hours CME.** Abstracts for poster or oral presentations from consultants, trainees and medical students are all welcome. Presentations should reflect the full range of clinical medical practice including research, clinical series, audit and case reports. Please submit by email (around 250 words including a short conclusion) to the secretary clive.kelly@ghnt.nhs.uk.

The Margaret Dewar prize for the best junior doctor or medical student's presentation will be awarded for the best oral presentation of the year (£150), runner-up (£100) and best poster (£50).

Have you considered joining the committee? Our meetings with refreshments take place 3 times a year. We are particularly seeking enthusiastic representatives from James Cook, Northumbria and Carlisle. If interested, please contact secretary Clive Kelly clive.kelly@ghnt.nhs.uk or president Peter Trewby (trewbyp@Gmail.com).

Also please e-mail the names of any new consultant colleagues or your own name if you are not already on the mailing list to the secretary and consider presenting your research for the Hewan Dewar prize awarded annually for the best research paper submitted by a junior doctor or medical student.

We look forward to seeing you at the Freeman Postgraduate Centre on Wednesday 14 March 2018 at
6 pm.
