Oral Presentations

O-1 ENHANCED SUPPORTIVE CARE IN CANCER

[1,2]Richard Berman, [1]Elizabeth Elliott, [1]Lisa LaMola, [1]Carole Mula, [1]Hannah Talbot, [1]Sacha Kong, [1]Wendy Makin, [1]Julian Scott-Warren. *[1]The Christie NHS Foundation Trust, Manchester, UK; [2]NHS England, UK*

10.1136/bmjspcare-2017-00133.1

Background Enhanced Supportive Care (ESC) is a fresh approach to supporting people through cancer treatment. At its heart is better and earlier access to expertise in managing the adverse effects of cancer and cancer treatments. ESC is recognised nationally by NHS England, and received a Quality in Care (QiC) award (February 2016).
Methods In (2012–2015), The Christie NHS Foundation Trust (a major cancer centre) piloted ESC across 4 cancer disease groups (skin, breast, hepatobiliary, upper GI). We provided *appropriate* supportive care treatments, at an early stage, for patients who were starting to develop problems with pain or symptoms, related to their cancer or cancer treatments. We also worked with oncologists to improve communication with primary care teams. In order to facilitate early involvement, we rebranded and changed the name of our team from 'palliative care team' to 'supportive care team'.
Results A reduction was seen in the relative number of emergency admissions in disease groups where there has been significant ESC support. Such reductions were not seen consistently in those disease groups that did not receive significant ESC support. This reduction in emergency admissions suggested a potential £1.38m saving over a three year period. ESC also demonstrated improved patient and carer experience. Patients benefitted from being presented information in a hopeful and positive way. The initiative was warmly welcomed by colleagues in oncology.
Conclusion The landscape of cancer is changing due to better treatments. More and more people are living longer with chronic cancer. In line with emerging research on the benefits of early palliative/supportive care, ESC demonstrates improved quality and reduction in overall healthcare costs. The reduction in emergency admissions may reflect early detection and management of symptom problems, preventing these from escalating. The next phase of ESC broadens access to supportive care through integration with acute oncology and development of local ambulatory ESC units.

O-2 CANCER RELATED INSOMNIA: WIRELESS MONITORING OF SLEEP METRICS

[1,2]Brenda O'Connor, [1]Pauline Uí Dhuibhir, [1]Stephen Higgins, [1]Lucy Balding, [1]Norma O'Leary, [1,2,3]Declan Walsh. *[1]Our Lady's Hospice and Care Services, Dublin, Ireland; [2]School of Medicine, Trinity College Dublin; [3]UCD School of Medicine and Medical Sciences, University College Dublin*

10.1136/bmjspcare-2017-00133.2

Background Insomnia involves difficulty with sleep onset, maintenance, early morning wakening or non-restorative sleep. Prevalence is 30%–75% in cancer. Consequences include fatigue and impaired memory or concentration. It is underreported, overlooked and severely impairs quality of life. Subjective sleep diaries underestimate insomnia. Objective measurements previously required dedicated sleep laboratories. Wireless medical technology enables objective sleep measurement in the natural environment.
Aims
- Conduct a feasibility study to examine if a wireless monitor can measure sleep in cancer.
- Evaluate acceptability in:
  a. Patient
  b. Nurse
  c. Family
- Correlate objective device results with subjective reports.

Methods A prospective observational study recruited 10 consecutive hospice inpatients (IP) and 20 consecutive community participants (CP) with cancer. Insomnia Severity Index recorded subjective sleep pattern. Participants used a wireless non-contact bedside sleep monitor for 3 nights. Three insomnia features were examined (sleep onset, maintenance, early awakening). A daily sleep diary was completed. Acceptability questionnaires were completed by patient, nurse and family. Statistical analysis was undertaken with SPSS version 22.
Results The device successfully recorded sleep patterns in all 30 participants. Inpatients: Mean age was 63 years (range 47–61). 7/10 were positive for one or more insomnia features. Delayed sleep onset was most common (7/10). Community Participants: Mean age was 64 years (range 47–84). 15/20 were positive for one or more insomnia features. Fragmented sleep was most common. 14/20 recorded over 30 min awake overnight with more than 2 awakenings. Early morning wakening was not present in either cohort. Poor sleep hygiene was noted in community participants compared to inpatients. Correlation between subjective and objective measures was not significant (IP: $p=0.07$; CP: $p=0.106$). Patients, nurses and family members reported 100% device acceptability.
Conclusions
1. A wireless bedside monitor effectively measures sleep in cancer.
2. High patient acceptability supports clinical use.
3. Cancer-related insomnia features were common in both cohorts.
4. Objective measurements correlated poorly with subjective.

O-3 OPIOIDS, BENZODIAZEPINES, ANTI-CHOLINERGIC LOAD AND CLINICAL OUTCOMES IN PATIENTS WITH ADVANCED CANCER

[1]Jason W Boland, [2]Victoria Allgar, [1,3]Elaine G Boland, [1]Osaretin Oviasu, [4,5,6]Meera Agar, [1,4,5]David C Currow, [1]Miriam J Johnson. *[1]Hull York Medical School, University of Hull, Hull, UK; [2]University of York, York, UK; [3]Hull and East Yorkshire Hospitals NHS Trust, Hull, UK; [4]University of Technology Sydney, Sydney, Australia; [5]Discipline, Palliative and Supportive Services, Flinders University, Adelaide, South Australia; [6]Ingham Institute of Applied Medical Research, Sydney, Australia*

10.1136/bmjspcare-2017-00133.3

Background Medications used to manage symptoms in patients with cancer have associated, but poorly understood, harms. The aim of this study was to explore the temporal relationship between oral morphine equivalent daily dose (MEDD), oral diazepam equivalent daily dose (DEDD) and the daily anti-cholinergic load (ACL) with cognitive and gastrointestinal symptoms, performance status, quality of life and survival in patients receiving palliative care.
Methods Secondary longitudinal analysis of cancer decedents (n=235) from a palliative care trial with multiple outcome

measures. At each time-point MEDD, DEDD and ACL were calculated. Multilevel modelling was used to investigate independent associations between MEDD, DEDD and ACL, and cognitive and gastrointestinal symptoms, quality of life, performance status and survival.
Results Cognitive and gastrointestinal symptoms, performance status, and quality of life worsened over time. In the adjusted multilevel analysis significance remained for worsening performance status (MEDD, p=0.001; DEDD, p<0.001; ACL p=0.035) and shorter time to death (MEDD, p<0.001; ACL, p<0.01).
Conclusion Commonly used palliative medications were associated with deteriorating performance status and shorter time to death. This analysis highlights the importance of adjusting for other variables, including other medication when exploring medication-related harms. An understanding of the risk-benefit balance of medications is needed to maximise net benefit for patients. Future work to delineate interactions between classes of drugs and drug-related harms and to evaluate early assessment and management of side-effects is needed in order to maximise net benefit.

O-4 USE OF ACTIGRAPHY FOR PROGNOSTICATION IN CANCER PATIENTS

Andrew Davies.

10.1136/bmjspcare-2017-00133.4

O-5 A SYSTEMATICALLY STRUCTURED REVIEW ON BIOMARKERS OF DYING IN CANCER PATIENTS AT THE END OF LIFE; AN EXPLORATION OF POTENTIAL MECHANISMS FOR THE BIOLOGY OF DYING

[1]Victoria Reid, [2]Rachael McDonald, [1]Amara Callistus Nwosu, [1]Stephen R Mason, [3]Chris Probert, [1]John E Ellershaw, [1]Seamus Coyle. *[1]The Marie Curie Palliative Care Institute, University of Liverpool, Liverpool, UK; [2]Renal Medicine, Aintree University Hospital NHS Foundation Trust, Liverpool, UK; [3]Department of Gastroenterology, University of Liverpool, UK*

10.1136/bmjspcare-2017-00133.5

Background The Neuberger review made a number recommendation to improve end of life care, including research into the biology of dying. An important aspect of the biology of dying is the identification of biomarkers of the dying process. Biomarkers have the potential to assist clinicians in recognising dying, in particular how to distinguish dying from reversible acute deterioration.
Objectives To critically appraise the existing literature on prognostic biological factors that impact survival in advanced cancer patients in the last days, weeks or months of life; to identify prognostic models for advanced cancer patients, which could assist clinicians to prognosticate in the last days, weeks or months of life; and to identify candidate biomarkers of the dying process that can be measured serially in bodily fluids.
Methods A systematically structured review was conducted using three electronic databases. A hand search of six peer-reviewed journals and conference abstracts was also conducted. Studies reporting biomarkers of dying in cancer patients with a median survival of ≤90 days, and post-mortem studies were included.
Results 30 articles were included. There is grade A evidence for the following biological factors: serum CRP, WBC count, lymphopaenia, serum sodium, urea, ALP and hypoalbuminaemia. An additional nine prognostic factors were identified with grade B evidence including: thrombocytopaenia, elevated vitamin B12, hyperbilirubinaemia, hypocholesterolaemia, elevated AST, ALT, LDH and INR. In the last two weeks of life, a number of biomarkers have been identified but limitations exist. No post-mortem studies met the inclusion criteria.
Conclusion The biology of dying is an important area for future research interest. The evidence base to date is largely focused on symptoms, signs and prognostic factors. We identify a number common themes shared amongst advanced cancer patients, candidate biomarkers of dying, and areas for future research including non-invasive research methodologies.

O-6 A CLUSTER RANDOMISED TRIAL OF CLINICALLY ASSISTED HYDRATION AT THE END OF LIFE

[1,2]Andrew Davies, [1]Melanie Waghorn, [2]Sigurd Johnsen. *[1]Royal Surrey County Hospital, Guildford, UK; [2]University of Surrey, Guildford, UK*

10.1136/bmjspcare-2017-00133.6

Background Clinically-assisted hydration (CAH) at the end-of-life is one of the most contentious issues in medicine, partly due to the fact that there is no good data to support/refute its use in this scenario.
Methods The study was a cluster randomised trial (feasibility study) comparing CAH with oral care in patients with advanced cancer receiving end-of-life care under palliative care teams in 12 hospices/hospitals in the UK. The main outcomes related to the feasibility of conducting a definitive study, whilst the clinical outcomes included the prevalence of end-of-life care symptoms (particularly hyperactive delirium), adverse effects, and overall survival.
Results 200 patients were recruited in 1 year, and all feasibility criteria were achieved. The prevalence of delirium was similar in the two groups, although the onset of delirium was delayed in the CAH group (112 hour versus 58 hour). Similar results were seen for excess respiratory secretions ("death rattle"). Median survival was greater in the CAH group (i.e. 5 days versus 3 days). Thirty-eight percent patients discontinued CAH due to perceived adverse effects (e.g. localised swelling, respiratory secretions).
Conclusion Interventional trials are possible in patients at the end-of-life, but the methodology needs to be somewhat adapted. The results of the feasibility study suggest that CAH may have a positive influence of end-of-life problems, and possibly survival. However, a larger/definitive study is required to confirm these findings. CAH is associated with adverse effects in some patients, but these may be less than perceived by palliative care specialists.

O-7 ROBOTIC TECHNOLOGY AND PALLIATIVE CARE EDUCATION: THE DEVELOPMENT OF A 'NAO ROBOT' COMPUTER PROGRAM

[1]Bethany Sturgeon, [2]Terry Payne, [3]Stephen Mason, [3]Amara Nwosu. *[1]University of Bristol, Bristol, UK; [2]Department of Computer Science, University of Liverpool, Liverpool, UK; [3]Marie Curie Palliative Care Institute Liverpool, University of Liverpool, Liverpool, UK*

10.1136/bmjspcare-2017-00133.7