

Palliative Care Symposium

**A joint symposium with the Royal College of General Practitioners
held on 28 March 2011 at the Royal College of Physicians of Edinburgh**

COMPLEX PAIN IN PATIENTS WITH A HISTORY OF ADDICTION

Dr Lesley Colvin, Senior Lecturer in Anaesthesia, Western General Hospital, Edinburgh, UK

This session will address the co-morbidities of pain and substance misuse. Successful management of these co-morbidities is unlikely, unless both problems are addressed, ideally by specialist services working in a co-ordinated fashion. Opioids can be extremely effective analgesics and while pre-existing substance misuse should not result in the patient being denied opioids, it does complicate the management of these patients.

The prescribing of strong opioids as analgesics to patients with co-existing mental health and substance misuse problems has increased by up to 50% over the past few years, and may be growing faster within this population than in the population as a whole.

Strategies to manage individual patients need to be developed, as do services that will allow this group of patients access to adequate and safe pain relief. Assessment and management of individual patients as well as a suggested approach to service design will be discussed.

Further reading

- 1 The British Pain Society. Pain and substance misuse: Improving the patient experience. London: The British Pain Society; 2007. Available from: http://www.britishpainsociety.org/book_drug_misuse_main.pdf
- 2 Ballantyne JC. Opioid misuse in oncology pain patients. *Curr Pain Headache Rep* 2007; 11:276–82.
- 3 Ballantyne JC, LaForge KS. Opioid dependence and addiction during opioid treatment of chronic pain. *Pain* 2007; 129:235–55.
- 4 Jage J. Opioid tolerance and dependence – do they matter? *Eur J Pain* 2005; 9:157–62.
- 5 Martell BA, O'Connor PG, Kerns RD et al. Systematic review: opioid treatment for chronic back pain: prevalence, efficacy, and association with addiction. *Ann Intern Med* 2007; 146:116–27.

EMOTIONAL DISTRESS AND OTHER SYMPTOMS

Professor Michael Sharpe, Professor of Psychological Medicine, University of Edinburgh and University of Oxford, UK

Distress of varying degrees is common in those who have experienced a diagnosis of, treatment for or physical deterioration due to cancer. Much of such distress is transient, but for an important minority of patients (5–10%) this becomes persistent to the point that it meets criteria for a psychiatric disorder, commonly that of major depressive disorder.

Major depression has a substantial effect on quality of life and also influences adherence to treatment and probably survival. It is therefore curious that our current cancer services in both primary and secondary care are very poor at identifying and treating depression in cancer patients.¹ The reasons for this are attitudinal, educational and organisational. We can improve the current situation by developing and implementing systems that can systematically identify and effectively manage depression in patients attending cancer services. Such an approach can be more cost-effective in terms of achieving additional quality-adjusted life years than expensive anti-cancer treatments.² We also need similar approaches to the detection and treatment of the other common symptoms of pain and fatigue. Overall the evidence suggests that we should implement a system of care aimed at relieving patients' symptoms that runs parallel, and is given similar importance, to that aimed at treating their cancer. If we fail to do this we risk prolonging life at the expense of quality of life.

References

- 1 Sharpe M, Strong V, Allen K et al. Major depression in outpatients attending a regional cancer centre: screening and unmet treatment needs. *Br J Cancer* 2004; 90:314–320.
- 2 Strong V, Waters R, Hibberd C et al. Management of depression for people with cancer (SMaRT oncology 1): a randomised trial. *Lancet* 2008; 372:40–48.

SIR STANLEY DAVIDSON ENDOWED LECTURE: INFLAMMATION, SYMPTOMS AND TUMOUR PROGRESS

Dr Neil MacDonald, Oncologist and Palliative Care Physician, Cancer Nutrition – Rehabilitation Programme, Montreal, Canada

Cancer develops and progresses because of aberrations in the cell genome, coupled with changes in the tumour microenvironment supporting growth and metastases. Inflammatory processes are key elements of the microenvironment, while many tumours also manufacture cytokines which further proliferation and survival.

Inflammation also enhances the severity of many symptoms, which adds to the burden of suffering of patients and families.

The presentation will consider the key role of inflammation in cancer and related symptoms and offer a rationale for changing the focus of current research to factor in a priority for anti-inflammatory therapies.

ASSESSMENT AND MANAGEMENT OF CACHEXIA

Professor Kenneth Fearon, Professor Surgical Oncology and Honorary Consultant Colorectal Surgeon, Western General Hospital, Edinburgh, UK

Cancer cachexia is a multifactorial syndrome that encompasses a spectrum from early appetite or metabolic changes (pre-cachexia) to a state of severe incapacity incompatible with life (refractory cachexia). The molecular basis of the syndrome in animal models (based on host-tumour cell interaction, the neuro-hormonal control of appetite and the hypertrophy/atrophy pathways that govern muscle-wasting) has provided a new raft of biomarkers and therapeutic targets.

Key defining features of cachexia in humans (muscle loss, reduced food intake and systemic inflammation) now provide not only a framework for classification but also a rationale for targets for therapeutic intervention. The role of age and immobility in muscle-wasting also provides a rationale for the nature of nutritional support in cachexia. There is now substantive evidence that multimodal approaches that address these key issues can stabilise and even improve the nutritional status, function and quality of life of at least a proportion of advanced cancer patients. Such benefits can only be achieved against a background of optimal general medical and oncological care.

Novel biomarkers for patient stratification and more specific techniques for the estimation of muscle mass and physical activity level herald a new era in trial design. The

current evidence base justifies new enthusiasm for the design of complex intervention studies in the management of cancer cachexia.

MANAGEMENT OF BREATHLESSNESS IN NON-MALIGNANT DISEASE

Dr Miriam Johnson, Senior Lecturer in Palliative Medicine and Honorary Consultant Physician, Hull York Medical School, Hull, UK

Breathlessness is the final common pathway for many diseases including lung cancer, congestive heart failure and chronic lung disease. Distressing for patients and those who care for them, it may become refractory to interventions and in particular appears less responsive to pharmacological treatments than other symptoms such as pain.

However, the perception of breathlessness shares many features in common with pain, both clinically with every domain of life affected, and with neuro-imaging.

Management rests on complete assessment, optimisation of disease-specific treatments, reversal of potentially reversible components to the breathlessness and use of a complex treatment comprising a mixture of non-pharmacological and pharmacological interventions.

This presentation will summarise the mechanisms involved in the perception of breathlessness, and discuss the evidence base for non-pharmacological and pharmacological interventions for this often refractory symptom.

IMAGING PAIN AND RELIEF IN THE HUMAN BRAIN

Professor Irene Tracey, Director of Oxford Centre for Functional Magnetic Resonance Imaging of the Brain (FMRIB), University of Oxford, Oxford, UK

Until recently it has been difficult to obtain reliable, objective information from normal subjects and patients regarding their subjective pain experience. Relating specific neurophysiological markers to perceptual changes induced by peripheral or central sensitisation, behavioural, psychological or pharmacological mechanisms and identifying their site of action within the central nervous system have been a major goal for scientists, clinicians and the pharmaceutical industry.

Identifying, non-invasively, where plasticity, sensitisation and other amplification processes might occur along the pain neuraxis for an individual, and relating this to their specific pain experience or measure of pain relief has considerable value and potential diagnostic value. With the advent of functional neuroimaging methods, such as

functional magnetic resonance imaging (fMRI), positron emission tomography (PET), electroencephalography (EEG) and magnetoencephalography (MEG), this has been made feasible. This activation, often considered an 'objective' readout of the subjective phenomenon, can be related to what the patient describes, allowing issues such as how anxiety, depression, attention, central sensitisation and so on, alter the pain experience to be better understood at a neuroanatomical level.

Over the past ten years, we have performed several experiments that have specifically isolated areas of cortex and brainstem central to these processes; particularly those involved in the transition from the acute to chronic state. More recently, pharmacological functional magnetic resonance imaging (phMRI) has been developed and applied to the field of pain research within our laboratory. Again, many advances have been made that illustrate the neural correlates of analgesia in the human brain. New thoughts related to how pain and pleasure interact force us to broaden our understanding of relief mechanisms and wellbeing, results from which shall be discussed. Combined, these data provide evidence that neuroimaging tools will play an increasing role in clinical decision making and analgesic drug development in the coming decade.

Further reading

- 1 Tracey I. Getting the pain you expect: mechanisms of placebo, nocebo and reappraisal effects in humans. *Nat Med* 2010; 16:1277–83.
- 2 Ploner M, Lee MC, Wiech K et al. Prestimulus functional connectivity determines pain perception in humans. *PNAS* 2010; 107:355–60.
- 3 Lee MC, Zambreanu L, Menon DK et al. Identifying brain activity specifically related to the maintenance and perceptual consequence of central sensitization in humans. *J Neurosci* 2008; 28:11642–9.
- 4 Wiech K, Ploner M, Tracey I. Neurocognitive aspects of pain perception. *Trends Cogn Sci* 2008; 12:306–13.
- 5 Tracey I, Mantyh PW. The cerebral signature for pain perception and its modulation. *Neuron* 2007; 55:377–91.
- 6 Iannetti GD, Zambreanu L, Wise RG et al. Pharmacological modulation of pain-related brain activity during normal and central sensitization states in humans. *PNAS* 2005; 102:18195–200.
- 7 Ploghaus A, Narain C, Beckmann CF et al. Exacerbation of pain by anxiety is associated with activity in a hippocampal network. *J Neurosci* 2001; 21:9896–903.
- 8 Ploghaus A, Tracey I, Gati JS et al. Dissociating pain from its anticipation in the human brain. *Science* 1999; 284:1979–81.

CHALLENGES IN PAEDIATRIC PALLIATIVE CARE

Dr Richard Hain, Senior lecturer and honorary consultant paediatric palliative medicine, University of Cardiff, Wales, UK

We present two cases in which a child's parents have elected to withhold information from children suffering from a life-limiting condition. In both cases, the parents expressed their preference as a decision they have made in the child's best interest.

We consider the ethical basis of this claim, by examining it according to five potential ethical 'narratives' that might describe a child:

- The child as ethically indistinguishable from an adult.
- Childhood as a legally defined time period.
- The child as a potential adult.
- The child as a possession of its parents.
- The child as a possessor of rights.

We conclude that none of these is entirely satisfactory in developing an appropriate bioethical approach to the child, and begin to consider whether the nature of a child can ever be defined except in relation to adults.