

amount of effective CAM interventions will be briefly examined, linking all above with the implications for nursing practice and research.

Proffered papers Nursing research

1560

ORAL

Supporting the family: a feasibility study to develop and evaluate a nursing intervention

H. Plant¹, S. Moore¹, A. Sherwin¹, J. Medina², E. Ream², A. Richardson².
¹Guy's and St Thomas' Hospital NHS Trust, Cancer and Haematology, London, United Kingdom; ²King's College London, Florence Nightingale School of Nursing and Midwifery, London, United Kingdom

Background: Cancer engenders complex emotional and social reaction both in the patient and those close to them. Families may provide crucial support, yet their own distress may be as great as that of the patient. National guidance in England and Wales recommends services to support family and carers. However, it remains unclear exactly what the family's needs are, or how health care professionals might address them. This feasibility study aimed to develop and evaluate an effective and acceptable supportive nursing intervention for families and carers of people with lung cancer.

Methods: Family members of 20 people with lung cancer (n = 25) received an individualised supportive intervention from a Clinical Nurse Specialist (CNS). This involved an initial semi-structured 'assessment of needs and experiences' interview which allowed participants to articulate their concerns and explore how they were affected by their loved one's cancer. At the end of the interview a tailored plan of on-going support addressing informational, emotional, social and practical need was drawn up. To evaluate the intervention: family members completed 4 questionnaires assessing need, quality of life and emotional well-being at baseline and three months later. A semi-structured telephone interview was undertaken three months from the inception of the intervention to determine the participant's views. The CNSs kept a log of the frequency and nature of all contacts and undertook two taped reflective sessions about their experiences during the study. A final taped focus group with the CNSs will be conducted to allow detailed discussion on the process, outcomes and utility of the intervention.

Results: All participants have completed the initial assessment and collection of data at the 3 month point is ongoing. The nurses have completed two taped reflective sessions. Preliminary content analysis of the nurses' data suggests the key components of the intervention include acknowledgement, listening, information, monitoring, continuity and facilitating access to the healthcare team/system. The taped interviews with the family members reveal they have felt supported through a combination of emotional support and information.

Conclusions: Preliminary analysis indicates that a supportive intervention for families of people with lung cancer can be delivered by experienced nurses. In this feasibility study we have distinguished the active components of the intervention.

1561

ORAL

Older people's perceptions about information, decision making and treatment following a diagnosis of cancer

N. Kearney¹, Z. Choulirara², D. Stott³, A. Molassiotis⁴, A. Worth¹, C. Twelves⁵, G. Hubbard¹, M. Miller¹. ¹Cancer care Research Centre, Department of Nursing and Midwifery, University of Stirling, United Kingdom; ²School of Social Sciences Media and Communication, Queen Margaret University College, Edinburgh; ³United Kingdom Department of Geriatric Medicine, University of Glasgow, School of Nursing, University of Manchester, United Kingdom; ⁴School of Nursing, University of Manchester, United Kingdom; ⁵University of Leeds, United Kingdom

Background: Several studies have identified inadequacies in the care and treatment received by older patients with cancer as opposed to their younger counterparts. These include under diagnosis, ineffective symptom management and lower survival rates in older people with cancer. Despite these problems, there is little research on older peoples' perspectives regarding their cancer diagnosis and treatment. This study aimed to identify and describe the experiences of older people with cancer, regarding their diagnosis and treatment for cancer, and to develop a clinically meaningful framework for practice with such patients.

Materials and Methods: A purposive sample of 41 patients in total, were recruited from a specialist cancer centre (n = 24) and a care of the elderly unit (n = 17). Single, semi-structured interviews were conducted in

the hospital with each patient. Patients' cognitive and physical status, at the time of interview, were assessed using standardised clinical measures (the Mini-Mental State Examination and the 20-point Barthel Activities of Daily Living Index). Socio-demographic and medical information were noted from casenotes. Data were analysed using framework analysis.

Results: The analysis identified key themes in relation to older people's experiences of a cancer diagnosis and treatment, including: trust in health professionals, information and understanding, treatment expectations, experience of side effects, hopefulness and despair. Trust in health professionals was a core belief, which appeared to underpin the whole experience of cancer for older people. On the basis of these themes, a framework, consisting of strategies for clinical practice and decision making has been developed.

Conclusions: The findings highlight the issues that should be considered by those working with older people with cancer, which has led to the development of strategies for strengthening service delivery. Such findings have important implications for clinical practice and leadership, future research and the educational needs of health professionals.

1562

ORAL

The early diagnosis of severe sepsis in the person with cancer: a study exploring the use of nursing knowledge and intuition

S. Dolan¹, N. Pattison², P. Wainwright². ¹Royal Marsden Hospital, Critical Care, London, United Kingdom; ²Kingston University, Nursing and Health Sciences, Kingston, Surrey, United Kingdom

Central to this doctoral research study is the belief that cancer nurses working in the general ward setting often recognise the early changes that may signify an acute deterioration in the patient's condition. This belief is based on many years of clinical experience receiving referrals from ward nurses, and increasingly so in the last four years during work with the Cancer Critical Care Outreach team. There can however be a gap between this recognition and an appropriate multidisciplinary rescue strategy. An important part of this study is the attempt therefore to explore this knowledge and the reasons for this gap and where it may be based on lack of confidence or lack of knowledge to increase both using dedicated teaching sessions on every ward area.

This study is being undertaken at a time when there are growing challenges for the ward nurse who has to navigate a complex array of professionals, agencies and patient and family needs, with increasingly sicker patients on their general wards who are more likely to deteriorate more quickly and this is all with a background of acute nursing shortage (Cohen et al 1994, Wilkinson 1995, Meleis 2005). There are also growing technological changes particularly in cancer care, and an increase in the public's expectation of their care. Finally people with cancer in common with other people experiencing chronic illness are often well educated in their disease, it's monitoring and treatment, this can be seen as a challenge or as an asset, but is often daunting for the nurse or doctor who is new to cancer care (Paterson 2001, Korig 2002, Tattersall 2002, Wilson 2002).

The study is a mixed methods study including the use of face to face qualitative interviews and pre and post intervention tests for over 300 nurses. 400 patients are also recruited to another arm of the study which involves testing for an immunological predictor of severe sepsis – Procalcitonin.

The results of this doctoral study will be presented and recommendations made for changes in practice and for future research.

1563

ORAL

Peripherally inserted central catheters and implanted ports. A retrospective analysis of the complication rates and evaluation of associated costs

V. McInerney¹, M. Keane², D. O'Donovan³. ¹University College Hospital, Haematology/Medical Oncology, Galway, Ireland; ²University College Hospital, Medical Oncology, Galway, Ireland; ³National University of Ireland, Dept. of Health Promotion, Galway, Ireland

Background: Reliable central venous access is necessary in the management of patients receiving chemotherapy. Institutions differ in terms of venous access device used.

Peripherally Inserted Central Catheters (PICCs) have become a popular choice as they are more readily inserted and are generally regarded as safe. Implanted ports present with fewer complications and can be left in place long after treatment is finished.

The aims of the study were to: (1) examine and compare the complication rates of Peripherally Inserted Central Catheters and Implanted Ports in patients receiving chemotherapy for solid tumours and (2) evaluate the associated costs.

Methods: A retrospective review of case files from 114 subjects with solid tumours with a total of 138 PICC line or implanted port was conducted. Subjects were selected from two major cancer institutions in Ireland.

Results: Overall incidence of complications between devices was significant: 9.6 per 1000 days PICCs and 2.3 per 1000 days for ports ($p=0.054$). Ports were superior to PICCs in terms of infection (11% v 31%; $p=0.014$). Time from device insertion to infection averaged 33 days for ports and 3 days for PICCs. 7.8% of PICC lines dislodged. There was no significant difference between the port and PICC group with respect to thrombus formation and withdrawal occlusion. Port extrusion and palpitations occurred in 1.4% port population. Hospital stay due to device related complications were comparable. The mean duration of a chemotherapy course was 145 days for PICC line group and 130 days for the port group. 21% of subjects with implanted ports received a second course of chemotherapy through the device. The PICC line is logistically easier to insert and remove. The total cost of a PICC line was less expensive than a port (*432.00 euro V *2,711 euro).

Conclusion: Although the rate of complications was statistically more significant in PICCs, further analysis demonstrated that the type and site of these complications did not warrant substantial intervention compared to ports. This combined with the lower costs, would justify more extensive use of PICC lines in selected patients.

These findings highlight the need to conduct a larger study to further evaluate the cost effectiveness of both devices.

1564

ORAL

Substitution of the heparinized solution with the use of positive pressure and a normal saline solution when washing indwelling ports in oncological patients

A. Milani, C. Mc Donnell, C. Zencovich, L. Libutti, I. Limardi, L. Poloni, L. Adamoli, D. Micheli, F. Nolè, F. de Braud. *European Institute of Oncology, Medical Oncology, Milan, Italy*

Background: Since literature is still unclear and there is no available data regarding the correct maintenance of Ports, we would like to evaluate if a correct technique to maintain positive pressure during washing can replace the necessity of using heparinized solutions. The confirmation of this hypothesis could favour self-Port management by patients, avoiding patient anxiety and infection risk (eg. dilution of heparin).

Material and Methods: From September 2004 to April 2005 we enrolled 150 patients with advanced solid tumours undergoing chemotherapy or other intravenous pharmacological treatments (eg. diphosphonates) weekly or at least every three-four weeks through an implanted Port. They signed informed written consent. In these patients at the end of chemotherapy or other pharmacological treatment administered we washed the port with 20 ml of physiologic solution maintaining positive pressure until needle removal. Patients that underwent continuous infusion were not included. We evaluated Port functioning every time at the moment of taking blood samples and the our results were classified in:

- a. Normal (correct functioning of Port);
- b. Partial occlusion (we were able to infuse but not to take blood);
- c. Complete occlusion (we were not able to infuse or to take blood);

Results: 109 patients have been evaluated because they concluded at least three months on study. In 800 observations we found 788 correct functioning Ports and 12 partial occlusions of which only one of them was found for two consecutive times. We haven't observed any infections or complete occlusions. Among the 12 cases with partial occlusion there was no significant correlation with washing frequency or Port anatomic position. Recruitment is still open.

Conclusions: Our data are encouraging and confirm the importance of a correct injection technique instead of Heparin use to preserve Port functioning. We observed a lower incidence of complications than what was described with the use of heparinized solution, but a second phase of study will certainly be necessary to evaluate and confirm our results by patients self care in the home environment.

1565

ORAL

Objective measurements of radiotherapy induced erythema in breast cancer patients treated with electrons to 50 Gy after mastectomy

A. Svensk¹, J. Larson¹, J. Nyström², P. Geladi³, B. Sethson², L. Franzén¹.
¹Northern University Hospital, Department of Oncology, Umeå, Sweden;
²Umeå University, Department of Chemistry, Umeå, Sweden; ³SLU Rönäcksdalen, The Biomass Technology and Chemistry Unit, Umeå, Sweden

Background: Although Radiotherapy is an important cancer treatment method, it is afflicted with adverse side effects. Breast cancer is the most frequent cancer form among women in Sweden with about 6300 new cases per year. Up to 95% of patients treated with external radiotherapy will experience some form of skin reaction with individual differences. Most studies validate the extent of erythema with subjective analysis such as visual inspection. In the present study, different techniques were

implemented to monitor erythema in an objective manner. The purpose was to present evidence for individual differences in the radiation response of human skin treated with high energy electrons.

Material and Methods: The participants ($n=50$) were women with breast cancer who had undergone total mastectomy and were subjected to treatment with high energy electrons; 2 Gy/day for a total of 50 Gy. The skin of the patients was measured with Laser Doppler and a Digital RGB camera. The reference measurement is the measurement taken before treatment (digital photography) or on unirradiated skin (laser doppler). The Laser Doppler measurements are univariate average perfusion results over an area of 7 cm². The digital images were converted to multivariate data by taking the average, standard deviation and skewness of the red, green and blue channels.

Analysis: The Laser Doppler data can easily be converted to univariate curves. For the image data, the data space was reduced from the original nine variables to two scores by principal component analysis. The two scores explain 99% of the total variance.

Results: For many of the patients, the Laser Doppler results showed an increase in average perfusion, but some patients showed no changes at all. The standard deviation of perfusion without radiation was 17 units. Given this it can be shown that many patients end up higher than three standard deviations above the mean during radiation, usually after a dose from 34 Gy-50 Gy. The multivariate results of the camera data are shown in a score plot of the two largest scores (95.3 resp. 3.7%). The score plot shows a high variation in the data, but also a marked difference between nonirradiated skin and skin radiated with over 34 Gy.

Conclusion: With this objective method, it is possible to show an accurate evaluation of the visible acute skin reactions. The result show a high interindividual variation and radiotherapy induced erythema can be a possible marker for individual acute radiosensitivity. Further research is needed to explore if a high grade of erythema will be of any significant importance for local control.

Joint EONS/ESO symposium

Communication with cancer patients

1566

INVITED

Introduction on communication

J.A.D. Foubert. *Erasmushogeschool, Gezondheidszorg, Jette, Belgium*

Communication among human beings is complex and often is neither linear nor necessarily accurate. In the oncology setting, patients interact with a variety of healthcare providers.

Communication skills are the cornerstone of the patient-provider relationship in cancer care.

This relationship can be complicated by patient and family perceptions and expectations, emotional state and disease course. Cancer diagnoses and treatment often produce anxiety in patients and families who need time to discuss their psychosocial concerns.

Therefore healthcare providers must possess excellent communication skills. Lack of these skills can diminish patient disclosure, increase patient anxiety and decrease satisfaction with care. Communication skills are not often assessed by healthcare professionals.

Communication skills for all oncology professionals are worthy of evaluation and development as an important component of oncology care (Fallowfield et al., 2002).

Oncology nurses are aware of the need for sensitive communication between patients and their providers and a number of training programs are existing.

Future research is needed to assess the flow, content and style of communication at particular points in patient's disease and treatment. Finally, standardized observational instruments are needed to assess the effectiveness of communication skills training programs.

References

- [1] Clinical Journal of Oncology Nursing, vol. 9, number 3, the effectiveness of skills training workshops.

1567

INVITED

Communication needs of cancer patients

L. Faulds Wood. *European Cancer Patient Coalition, Chairman, London, United Kingdom*

The biggest problem faced by cancer patients is access to information – that was the result of a survey of 130 patient organisations carried out by the European Cancer Patient Coalition (EPCPC) in 2004. Second biggest problem – access to appropriate treatment.