dence, due to decrease in necessary dressing change in 100%. The wound treatment gives well-being due to comfortable and flexible dressing material in 83%, and wound treatment gives increased quality of life, due to control of exudation problems (100%), and control of odour problems (67%). The wound treatment increases feelings of womanliness and attractiveness. This lead to decreased social isolation.

Conclusion: The wound treatment results in smaller cancer wounds, it gives well-being, and increased quality of life, due to continuity, evidence based wound knowledge, modern wound products, and psychosocial support. The woman demand that nurses and doctors takes the responsibility for wound treatment. A greater insight is achieved into management and care of patients with cancer wounds.

1168 ORAL

The phenomenon of fatigue in young people

F. Gibson[1], A. Mulhall[2], A. Richardson[3], J. Edwards[4], E. Ream[3], B. Sepion[5]. [1] *Institute of Child Health, GOSH and KCL, Centre for Nursing and Allied Health Professions R, London, United Kingdom;* [2] *Independent Training and Research Consultant, Norfolk, United Kingdom;* [3] *King's College London, Nursing and Midwifery, London, United Kingdom;* [4] *Great Ormond Street Hospital, Centre for Nursing and Allied Health professions Research, London, United Kingdom;* [5] *University of Southampton, Nursing and Midwifery, Southampton, United Kingdom*

Background: Cancer-related fatigue (CRF) is achieving recognition as a common and disturbing symptom for adults with cancer (Richardson, 1995, Stone et al., 1998). CRF has only recently been recognised and reported in children and teenagers (Hockenberry-Eaton and Hinds 2000, Langeveld et al 2000, Davies et al 2002). This paper will present a descriptive study that explores the impact of cancer and its treatment on young people. It draws on a multi-centred collaborative project involving nurses who care for adults, and who have considerable expertise in researching CRF, and nurses who care for children and young people.

Materials and methods: The study uses semi-structured interviews, diaries and focus groups to collect narrative data in order to discover the essence of the phenomena of fatigue in young people from their perspective. The sample includes those who are receiving treatment for cancer (n=8), those who are in early remission (n=8) and late remission (n=18), and a group who have not had cancer (n=20). Only the on treatment group will be reported in this paper. Data has been analysed using the phenomenological methods outlined by Moustakas (1994).

Results: Fatigue was present in varying degrees depending on the stage and intensity of treatments. Fatigue was experienced as absolute and complete exhaustion. It was unpredictable and varied in intensity and duration. Normal activity was prevented, which left teenagers weak, inactive and unmotivated. A number of strategies were used to relieve fatigue.

Conclusions: Fatigue was just one element of the teenagers overall experience, the experience of illness and treatment having altered their perspective on life itself.

1169 ORAL

Needs of family members of patients receiving palliative care services in Iceland.

N. Fridriksdottir[1], V. Sigurdardottir[2]. [1] *Landspitalinn Unversity Hospital, Oncology/hematology, Reykjavik, Iceland;* [2] *Landspitalinn University Hospital, Palliative Care, Reykjavík, Iceland*

The philosophy of palliative care emphasizes that the patients' family is the unit of care. The integration of families in palliative care has been the standard of care since the movement of organized palliative care began in Iceland in 1986. However, little has been documented about the needs of families of palliative care patients and how they are met by health care professionals.

The aim of this study was to evaluate care needs of families of patients receiving palliative sercives (PCS) on four different sites: palliative care inpatient unit, oncology unit, palliative home care and on general medical/surgical units with consultations from a palliative care consultation team. Family members of 111 patients admitted to these units between December 1999 and May 2001 were invited to participate and agreed to do so, 67 (60%) completed and returned the survey.

The Family Inventory Needs (FIN) questionnaire was given to family members on day 5 from admission to the PCS. The FIN consists of 20 statements about the importance of care needs and whether each need was currenly met, partially met or not met. Most of the family members who participated were the patients'spouse (59%), women (73%), younger than 56 years of age (59%), and worked outside of the home (62%). All 20 needs were perceived as being important or very important by 64-100% of participants. The most important needs were related to the patients' themselves but the less important ones were related to the family members'personal needs. Needs about infomation about symptoms were most seldom met (38-46%), whereas the need to feel that the professionals care about the patients was most often met (86%). On the average, most family members had their needs met by the palliative home care team (73%), and family needs were least met on general inpatient units (44%).

It is evident from these findings that family members of patients receiving palliative care services have multiple needs that they perceive as being important. It is also evident that much work needs to be done to meet those needs, particularily those who concern infomation sharing about the patients condition and that improvements are needed in general units where palliative care is not the area of specialization.

1170 ORAL

Patient education – a new strategy for prevention of infections due to permanent central venous catheters among patients with hematological malignancies: a randomized clinical trial

T. Moeller. *Copenhagen University Hospital Rigshospitalet, Hematology, Copenhagen, Denmark*

Objective: A well-functioning tunneled central venous catheter is a crucial factor for patients with hematological malignancies receiving high-dose intravenous chemotherapy and associated problems during treatment. Despite many advantages, infections associated with CVC's are a major cause of sepsis and excess length of stay in the hospital. The importance of stringent procedures during insertion and care are heavily recommended. Our aim was to investigate the impact of patient-education, where the patients themselves were taught to execute clinical catheter procedures.

Design: A prospective randomly designed clinical intervention study.

Methods: From May 2000 until September 2002 patients with hematological malignancies receiving high-dose chemotherapy and had a tunneled dobbeltlumen Hickman catheter inserted was consecutively randomized to one of two study-groups. The intervention group was individually trained by the clinical nurse-specialist to support an independent catheter care between admissions. The control group followed the clinics standard CVC-procedures carried out by professionals in and outside the hematological ward.

Results: 82 consecutive patients were finally included (respectively 42 and 40 patients). On several statistic tests, we found a significant reduction of catheter-related infections (CRI) due to the intervention group. The mean rates of CRI were decreased by almost three fold. The total incidence of CRI was more than halved for the intervention group (2,55/1000 catheter days) compared with the control group (5,91/1000 catheter days).

Conclusion: Rigorous patient-education as a primary clinical intervention can reduce catheter-related infections. The intervention has uncovered an unknown potential source and breaks with traditional thinking in health prevention policy.

1171 ORAL

Patients suffering from lung cancer. Experiences during radiotherapy.

H. Ekfors, K. Petersson. *Lund University, Dept. of Nursing, Lund, Sweden*

Distress experienced by lung cancer patients during RT is covered in quantiative studies concerning prevalence and correlation. Patients' verbal accounts of experiences and distress are not described sufficiently, enhanced knowledge is crucial to give individual nursing care during treatment. The aim of the study was to describe patients' experiences suffering from lung cancer during radiotherapy. An inductive, qualitative study was done on 15 patients at a Radiotherapy department in the southern part of Sweden. Interviews were done during the second week of treatment at one occasion, the transcribed data was analysed with content analysis and interpreted. The findings show that fatigue was a major symptom, expressed in terms of low energy levels and low condition, leading to social isolation. Managing daily life problems during radiotherapy was solved by routinising everyday life and by inner and/or outer resources. Emotional distress such as fear was expressed of the unknown, the future and sudden encounters. Patients go through a shift of accepting or not accepting the fact of letting cancer diagnosis rule their daily life. Informing about and assessing fatigue as well as implementing interventions and nurse-patient interaction, support, information, encourage and focus on patients' own resources may lead to improved comprehensive oncological care during treatment.

1172 ORAL

Feasibility, physical capacity, and health benefits of a multidimensional exercise program for cancer patients undergoing chemotherapy

L. Adamsen[1], J. Midtgaard[1], M. Rørth[2], N. Borregaard[3], M. Quist[4], J. Madsen[4], L. Knutsen[4], C. Andersen[2], T. Moeller[3], M. Zacho[5]. [1] *The University Hospitals Centre for Nursing and Care Research, Dept 7331, Copenhagen O, Denmark;* [2] *Dept. of Oncology, Dept. 5073, Copenhagen O, Denmark;* [3] *Dept of Hematology, Dept 4042, Copenhagen O, Denmark;* [4] *The University Hospitals Centre for Nursing and Car, Dept 7331, Copenhagen O, Denmark;* [5] *Copenhagen Muscle Research centre, Dept4042, Copenhagen, Denmark*

Background: Cancer patients frequently experience considerable loss of physical capacity and general well being when diagnosed and treated for the disease. This study aims at evaluating the feasibility, physical capacity, and health benefits of a multidimensional exercise program for cancer patients at advanced stages of disease who are undergoing adjuvant or high-dose chemotherapy.

Methods: The program includes high and low intensity activities (physical exercise, relaxation, massage, and body-awareness training). Twenty three patients (n=23), between 18-65 years of age (median 40 years) participated in a supervised program in groups of 7-9 patients 9 hours weekly for 6 weeks. Physical capacity (RM, VO2max), physical activity level and psychosocial well being (EORTC QLQ-C30, SF-36, HAD) were compared prior to and after completion of the program.

Results: The program was safe and well tolerated. The completion rate was 85.2%. Highly significant increases in physical capacity (1RM, VO2max) and an improved level of physical activity were achieved. Quality of life and general well being assessments indicated improvements in several measures, however, without reaching significance.

Conclusion: It is concluded that an exercise program, which combines high and low intensity physical activities, may be used to prevent and/or minimize physical inactivity, fatigue, muscle waste and energy loss in cancer patients undergoing chemotherapy.

Symposium

1173

Nutrition therapy for the cancer patient

B. Raynard. *Institut Gustave Roussy, Service de réanimation, Villejuif, France*

Malnutrition in cancer patient results from multifactorial events and is associated with an alteration of quality of life and a reduced survival. The combination of inadequate food intake and metabolic alterations generally leads to cancer cachexia. Several tumours could directly induce proteolysis and lipolysis. A simple nutritional assessment program and early counselling by a dietetitian are essential to guide nutritional support and to alert the physician to need an enteral (EN) or parenteral nutrition (PN). A daily intake of 20-35 kcal/kg, with a balanced contribution of glucose and lipids, and of 0.2-0.35 g nitrogen/kg is recommended both for EN and PN, with an adequate provision of electrolytes, trace elements and vitamins. EN, always preferable for patients with an intact digestive tract, and PN are both safe and effective methods of administering nutrients. The general results in clinical practice suggest no tumour growth during nutritional support. EN and PN is not clinically efficacious for well-nourished patients treated with chemotherapy or radiotherapy, unless there are prolonged periods of GI toxicity, as in the case of bone marrow transplant patients. Severely malnourished cancer patients undergoing major visceral surgery, also chemotherapy or radiotherapy, may benefit from perioperative nutritional support, preferably via enteral access. Nutritional support in palliative care should be based on the potential risks and benefits of EN and PN, and on the patient's and family's wishes. Research is currently directed toward the impact of nutritional pharmacology on the clinical outcome of cancer patients. Glutamine-supplemented PN is probably beneficial in bone marrow transplant patients. Immune diets are likely to reduce the rate of infectious complications and the length of hospital stay after GI surgery. Fish oil could inhibit tumour induced proteolysis. Further studies are needed to determine the efficacy of such novel approaches in specific populations of cancer patients, and should also address the question of the overall cost-benefit ratio of nutritional pharmacology, and the effect of nutritional support on length and quality of life.

1174

Can nurses and dieticians collaborate to improve the management of cancre-related anorexia and cachexia?

M. Simon. *Centre Alexis Vautrin, Cadre en dietetique, Vandoeuvre les Nancy, France*

It is now clearly established that nutrition level is closely related to morbidity and mortality especially in cancer disease and this before, during and after the different cancer treatments (surgery, radio or chemotherapy, ...).

Nurses have the privilege to take care of the patient in a globally way and due to their function are the closest persons to the patient.

Dieticians are specialists of nutrition care, that means of nutritional status, digestive function, alimentary behaviour, eating disorders, home nutrition organisation, ...

To take care and survey our patients we ask the same questions and use the same answers: weight, height, digestive functions, diagnosis, future treatment, medical constants (temperature, blood pressure, blood analysis, pain evaluation, ...).

But it clearly appears that usually there is only one dietician for several nursing departments. So, for more efficacy and efficiency it is recommended that nurses and dieticians work together in total complementarity and this at different care levels to improve the management of cancer-related anorexia and cachexia:

- At the arrival of the patient, a nutritional screening made by the nurses helps them to address the undernourished patient or those with an undernourishment risk, to the dietician. A right selection of the patient helps the dietician to be more efficient for the patient.
- During the treatment, it is very important to prevent nutritional complications of radio or chemotherapy. If nurses and dieticians deliver to the patients the same information (according to taste disorders, dysphagia, digestives disorders, ...), survey digestive functions and alimentary incomes, this will help the patients to accept the hardness of the treatments and lead them with less nutritional complications.
- After the treatments they survey and take care of the nutritional status, digestives disorders, help to home eating organisation, ...

In any case during the stay in hospital, the daily survey of alimentary intakes, help nurses to address the patient to the dietician. An early dietary undertaking helps to fight under-nutrition without wasting time: it is always better to prevent !!!!.

As we can see, at each level, nurses and dieticians needs to work together. A multidisciplinary team will guarantee to the patient an appropriate care, with efficacy and efficiency.

But a good collaboration needs to establish together evaluations forms for nutritional screenings, survey protocols, alimentary intakes recording, ... For a good quality patients undertaking, we need to share informations and have a common care attitude to save time fighting against cancer anorexia and cachexia.

In conclusion, to improve cancer-related anorexia and cachexia, we need an early and total collaboration between nurses and dieticians, developing closer working relationship.