Conclusions: The patients in this study had severe eating problems regardless of model of care. The patients in the SNCC received more often enteral nutrition and lost considerable less weight than the patients in the regular care group. Hence, this study shows that a SNCC can make appropriate early nutritional interventions possible and thereby optimize nutritional status. The findings also indicate that a SNCC can contribute to higher quality of life in patients suffering from HNC.

4263 POSTER

Symptom Clusters − the Reality for Patients With Lung Cancer

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Background: The concept of a symptom cluster in cancer nursing was first formally introduced by Dodd et al in 2001. However no study to date has formally explored the lived experience of symptom clusters in patients with lung cancer and this is a significant limitation in this body of research.
Materials and Methods: The aim of this study was to explore the lived experience of symptom clusters in patients with lung cancer. Using Interpretative Phenomenological Analysis (IPA), a qualitative approach stemming from the discipline of health psychology, ten patients with lung cancer were interviewed at two time points: on recruitment to the study and 3−5 weeks later. Data analysis was undertaken using the IPA framework advocated by Smith and Osborn (2003).
Results: The findings of the study illustrated the core role of context and meaning in the lived experience of symptom clusters in patients with lung cancer. Despite the participants reporting to be experiencing symptom clusters, many of their dialogues focused on individual symptoms. This focus on sentinel symptoms within the experience of symptom clusters in patients with lung cancer was attributed to the meanings that the individuals ascribed to these key symptoms which in this study were a fear of death, stigma and loss of sense of self.
The results of this study highlight that within the experience of symptom clusters, patients with lung cancer do not view all the symptoms that they are experiencing as being of equal weighting, but instead give certain symptoms credence over others based on the meanings that they ascribe to them. Such findings therefore suggest that patients with lung cancer experiencing symptom clusters create a meaning based hierarchy of symptoms, focusing on those that are most meaningful to them within the context of their lives.
Conclusion and Recommendation: The results of this study contest the predominantly quantitative measurement of symptom clusters and recommend the subsequent development of meaning-based, patient focused symptom cluster interventions for patients with lung cancer.

4264 POSTER

Improving the Symptom Experience of Patients With Lung Cancer Receiving Radiotherapy: Advanced Symptom Management System for Radiotherapy (ASyMS-R)

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Background: Clinical estimates suggest that 70% of patients with lung cancer will receive radiotherapy and are known to experience several symptoms related to both their treatment and disease, (Ekfors et al. 2004;John 2001;Wang et al. 2006) which are associated with reductions in quality of life and overall survival. Therefore effective symptom management is vital in this patient group. However, within the UK there appears to be no standardised means of assessing symptoms in patients with lung cancer receiving radiotherapy (Faithfull et al. 2003), therefore it is likely that symptom management in this patient group may not be optimal. The 'real time' monitoring of symptoms using mobile technology may be seen as means of improving the management of symptoms in this patient group.
Aim: Building on previous work (Kearney et al, 2009; Maguire et al, 2008) the aim of this study was to develop a mobile phone based, remote monitoring Advanced Symptom Management System (ASyMS-R) for the management of symptoms in patients with lung cancer receiving radiotherapy and to assess the feasibility and acceptability of the system in clinical practice. The study was conducted in two phases. Phase I developed the ASyMS-R system and phase II evaluated the feasibility and acceptability of ASyMS-R in clinical practice.
Materials and Methods: The study followed a prospective study design, utilizing a mixed methods approach previously advocated for the evaluation of new technologies within healthcare (May et al, 2003). Patients completed an electronic symptom questionnaire on the mobile phone, daily throughout their radiotherapy treatment and for one month post-treatment. Any symptom reports that were of concern, initiated an alert to the nurse at the clinical site, who then viewed a secure web page detailing the patients symptom report and triaged care accordingly. Patient and health professional perceptions of the use of ASyMS-R in clinical practice were assessed using semi-structured questionnaires and interviews pre and post-study.
Results: A total of 16 patients were recruited to the study. Patients using the ASyMS-R system reported positive perceptions of its use in clinical practice, reporting that it helped them to both manage their symptoms and communicate with health professionals. Health professional perceptions were mixed, however overall consensus was that the system was worthwhile and that the vision of using technology as a means of providing care to people with lung cancer was viable.
Conclusion: The use of ASyMS-R is feasible and acceptable to patients with lung cancer receiving radiotherapy and health professionals caring for them. Based on the findings of this study, a number of modifications will be made to accommodate use of this technology in routine clinical practice.

4265 POSTER

Management of Treatment Related Oral Mucositis With Carbomer Homopolymer a for Radiotherapy and Chemo-radiotherapy Induced Oral Mucositis

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Background: Radiotherapy (RT) and chemo-radiotherapy (C-RT) for the treatment of head and neck cancer are well known to produce severe, limiting oral mucositis (OM). Carbomer homopolymer A (MuGard®) has been reported as delaying onset and reducing the severity of oral mucositis. A pilot study was undertaken to assess the efficacy and tolerability of this approach.
Materials and Methods: An historical comparison of consecutive patients requiring RT and C-RT for oropharyngeal cancers (OPC) was undertaken, to assess the onset of RTOG Grade 3 OM, opiate analgesic requirements and supplemental feeding. A prospectively reviewed group of OPC patients were assessed for the same criteria, but commenced carbomer homopolymer A (MuGard®) four times daily, from day 1 of treatment until 7days post treatment. Efficacy and tolerability were assessed during and 7−14 days post-RT by means of oral clinical exam, interview and feedback questionnaire.
Results: The historical comparison group of 15 patients demonstrated median onset of G3 OM in week 3, coinciding with opiate analgesia requirement and nasogastric tube (NGT)/gastrostomy use. 20 patients were prospectively assessed for carbomer homopolymer A (MuGard®) efficacy and tolerability. 4 found the treatment unpalatable or were non-compliant. In the 16 compliant patients, the median onset of G3 OM was 5 weeks with only 2 patients requiring opiate analgesia. The median time for sustained oral diet was week 4 and median onset of nasogastric/gastrostomy feeding was week 5. At 7−14 days post-RT review, oral clinical exam demonstrated 3 patients had G3 OM, 7 had G2 OM, 4 had G1 OM and 2 had G0 OM. Although not assessed against the historical controls, continued follow-up suggested these patients returned more quickly to normal nutritional intake, stable weight and earlier removal of gastrostomies.
Conclusions: This pilot study suggests carbomer homopolymer A (MuGard®) is effective in prevention, delay and management of RT/C-RT induced OM, as well as reducing the need for opiate analgesia and NGT/gastrostomy use. However, patient compliance appears essential for maximum efficacy. This pilot warrants further study and may also have applications in the management of chemotherapy-induced mucositis. Additionally to the quality of life implications for the patient, there are potential cost implications in the reduction in OM induced hospital admissions and abandoned treatments.

4266 POSTER

A Retrospective Analysis of the Use of the Common Toxicity Criteria Tool in Patient Assessment

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Background: Patient assessment and reporting of toxicity plays a central role in oncology research. Accurate reporting and systematic grading of adverse events is important as it reduces the subjectivity of individual interpretation and facilitates data collection. The common toxicity criteria

(CTC) tool standardises the nomenclature and grade/severity of adverse events.
Purpose: A study was conducted to measure the accuracy of reporting adverse events and whether the CTC tool was used appropriately by oncology research nurses at a University Hospital. The specific objectives were to measure the frequency of correct use of medical terminology and the frequency of grading adverse events.
Methodology: A retrospective analysis comprised of a review of 378 assessments based on multiple visits of 72 cancer patients who had received chemotherapy as part of a clinical trial throughout January 2009 to May 2010.
Results: A total of 378 visits for chemotherapy treatment was made by all patients (n = 72) to the oncology day ward. In these patients, 1201 adverse events were observed. Of the 1201 adverse events observed, 80% (960) were documented using correct medical terminology and 20% (241 events) were documented using lay terminology. A total of 95% (1134) of events were graded.
Conclusion: In a regional cancer centre, one fifth of adverse events were not documented using medical terminology. Almost all (95%) adverse events were graded. Since this study, a pocket size CTC tool and a quick reference terminology guide were both introduced to improve quality and accuracy of clinical assessment documentation. We plan to re-audit in 12 months.

4267 POSTER

Nursing Management of Skin Toxicity With Focus on Acne-like Rash in Patients Receiving Cetuximab

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Background: Skin toxicity is the most important and often dose-limiting side-effect of anti-EGFR therapy, most often seen during the first two months of therapy. Severe rash is estimated to occur in 10−20% leading to reduction or interruption of therapy with potentially reduced efficacy. At our institution we have treated more than 280 gastrointestinal (GI) cancer patients with cetuximab and chemotherapy as first to fourth line therapy. From the start we were confronted with a number of new side effects; especially acute severe acne-like rash leading to social isolation for a number of patients. Therefore we investigated if early intervention with nurse administered tetracycline could minimize the severity of acne-like rash. Since the first randomized study was presented (Jatoi, ASCO 2007), we have offered oral tetracycline as part of our therapy for acne-like rash. Initially patients were evaluated weekly and tetracycline was prescribed by a physician if indicated. Since June 2008, nurses prospectively graded (CTCAE, 3.0), registered and prescribed initial therapy for acne-like rash in patients receiving cetuximab as part of their therapy for gastrointestinal cancers.
Methods: In 2009, we started a systematic treatment protocol for patients starting cetuximab. Patients were systematically educated by oncology nurses in the use of tetracycline and were instructed to contact the treating nurse if a rash occurred and then start therapy with tetracycline 500 mg x 2 daily. Tetracycline was continued for 8 weeks and then paused.
Results: In the inclusion period, 75 patients with GI cancer were educated in the use of administration of tetracycline and 63 patients (84%) received at least 1 month of therapy; and were evaluable. One patient experienced skin toxicity grade 3. Eight per cent of patients had dose reductions due to skin toxicity. Six patients (10%) did not develop skin toxicity and was spared initial prophylactic therapy. First outbreak of skin toxicity was reported by the patients after median 10 days (between 8 and 14 days). Twelve patients (20%) restarted therapy with tetracycline beyond 8 weeks, time from end of the 8 week pause to restart of tetracycline were 49 days (between 26 and 100 days).
Conclusion: We routinely administer cetuximab every second week. Therefore the first objective evaluation of acne-like rash is evaluated too late in the majority of the patients. Proper education of patients by nurses and access to telephone consultation with an oncology nurse will promote immediate administration of oral tetracycline and spare 10% for prophylactic therapy. This strategy reduces severity, but not incidence, of cetuximab skin toxicity and ensures an optimal dosing.

4268 POSTER

Rehabilitation and Treatment of Skin Reactions Secondary to Radiotherapy: a Result of Evidence-based Practice

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Background: Approximately 50% of cancer patients are treated with radiotherapy. Skin reactions occur in the majority of the patients. There are different procedures for rehabilitation and treatment of skin reactions secondary to radiotherapy, which in turn results in numerous variations of patient information. There was a need for evidence-based practice in order to determine the most effective treatment modality for skin reactions. The main goals were: 1) to determine the treatment modality 2) to utilize the RTOG skin Assessment tool for skin evaluations, and 3) to ensure that patients receive the same information from health care givers.
Materials and Methods: A literature search in electronic databases was done. A systematic review of available literature was conducted, consistent with the AGREE method. Experts within the medical, pharmacological, nursing and radiotherapy fields were consulted, and the treatment outcome was evaluated twice with a final evaluation in a hearing committee.
Results: The final treatment procedure includes guidelines for cleansing of the affected skin, use of lotions, sun exposure and incorporates the different stages of the RTOG skin reaction criterias. There is no evidence that the affected skin can be harmed by careful cleansing and lotion use. The expert-panel which was consulted concluded that there should not be restrictions in regards to lotion use, but the skin should be clean and dry before the patient's daily radiotherapy treatment. The literature did not give any suggestions for specific lotions other than that they should be perfume-free. There is no evidence in regards to the use of sodium chloride (NaCl) wraps as prophylaxis for skin reactions, but they can contribute to pain relief and infection prophylaxis. The use of non-adherent dressings is recommended in moist desquamation.
The affected skin should be covered and protected for sun exposure up to one year after radiotherapy.
The expert-panel authored patient information, and also advised that health care givers document skin reactions according to the RTOG scale to ensure similar evaluation methods and treatment.
Conclusions: Patients will receive holistic care and treatment in addition to uniform patient information by utilizing the above-mentioned treatment procedure. Results of the literature review also indicate the need for more research on treatment for skin reactions secondary to radiotherapy.

4269 POSTER

Pharmacological Cancer Treatment and Sun Exposure − Evidence Based Guidelines for Patients and Health Personnel

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Background: Doctors and nurses at the Norwegian Radium Hospital, provided different and conflicting patient information about sun exposure during and after chemotherapy and other pharmacological cancer treatment. The aim of this study was to develop evidence based guidelines for health personnel and more consistent patient information on this subject.
Methods: A systematic search for relevant research literature was conducted according to the principles of evidence based practice.
Results: There were a few case reports, but as expected no relevant randomized controlled trials (RTCs). Some review articles summarized the theoretical knowledge and literature on the subject. The findings revealed that there were a few types of chemotherapy and other cancer drugs that could trigger photosensitivity reactions like severe sunburn. The most reported drugs were: Methotrexate, Dacarbacine, Fluorouacil and Vinblastine. Other cancer drugs may also cause adverse skin reactions, such as hand-foot-syndrome (PPE) or acne-like rash which is often seen during treatment with EGFR-inhibitors. The literature revealed that sun exposure may exacerbate these reactions in the skin.
Conclusion: The Guidelines developed for the Oslo University Hospital based on these findings provides specific recommendations on how cancer patients can prevent aggravation, soothe and treat skin reactions related to drug therapy. Patients receiving cancer drugs should be careful with sun exposure during treatment, and as long as the drug is effective in the body as they may be disposed to photosensitivity reactions. They should also protect themselves against the sun if they have any kind of skin reaction as a result of side effects from cancer treatment.

4270 POSTER

Symptom Management − Let's Do It Evidence Based

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Background: Patients with cancer disease are troubled by a multitude of symptoms related to both the disease and its treatment. Numerous studies have shown the positive effects of providing patients with the requisite information of what they can expect in relation to their situation.
The results from a cross-sectional investigation performed in 2007 at the Department of Oncology showed that nausea and vomiting were experienced by 44% (n = 119) of the patients (n = 267). Nausea is a