3052 POSTER

Ten Top Tips for Cancer Survivorship: a Prompt for Cancer Patients at the End of Their Primary Treatment

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Background: More and more people are being successfully treated for cancer. There are believed to be around 14 million people in Europe (Eurocare 2011) and 2 million in the UK living with and beyond cancer. It is known that people often have difficulties after their cancer treatment has finished and that their needs are not always met. Current evidence points towards an increasing need for cancer survivors to be supported in the period after treatment but at present such support is not always well coordinated, sufficiently-developed and may come from a variety of sources. This can create confusion and guidance is needed to help cancer survivors navigate through current care systems in order to receive the care they need and/or might find helpful.
Methods: A group of 12 specialist nurses and allied health professionals collaborated to develop a guide for cancer patients to use when they reach the end of treatment. The CCAT (Consequences of Cancer Treatment Collaborative) group was brought together by Macmillan Cancer Support as part of the UK National Cancer Survivorship Initiative in order to improve care for people living with the effects of cancer treatment. The Top Tips were designed in response to evidence suggesting that the current after care arrangements in the UK not always meeting the needs of cancer survivors following treatment. The top tips aim to empower cancer survivors to bring about changes in care to ensure that they get the care and support they need to lead as healthy and active a life as possible, for as long as possible. The leaflet was compiled in partnership with cancer survivors, GPs and oncology health care professionals.
Results: The leaflet was developed with 10 key headlines and a short description to help guide patients as to what care they should expect to receive. These were:
1. End of treatment assessment
2. Plan of care
3. Who to contact
4. Managing symptoms
5. Worries about cancer
6. Healthy living
7. On-going check-ups
8. Day to day concerns
9. Talking about your feelings
10. Make suggestions and get involved.

Conclusions: These ten top tips have been designed to help orientate cancer survivors as to what to expect once they have finished their treatment and direct them to seek tailored support to address any needs that they may have or may develop in the future. This could have long term benefits for their health, their well-being, and for the wider health economy.

3053 POSTER

Venous Thrombosis Rates in Early Breast Cancer Patients Receiving Standard Chemotherapy, a Retrospective Analysis. Investigation and Treatment of Upper Limb Symptoms

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It is well known that cancer and chemotherapy are linked to venous thromboembolic events (VTE). They are a common occurrence in early breast cancer (EBC) patients receiving both standard chemotherapy regimens of 5-flurouracil, epirubicin and cyclophosphamide alone (FEC75) or followed by a taxane (FEC-T). It appears to occur particularly in the upper limb and causes significant morbidity to our patients. However there is little data on rates of VTE in specific chemotherapy regimens and how best to manage patients. This study describes rate of VTE, risk factors and discusses best management practices.
All patients receiving FEC75 and FEC-T chemotherapy in KCH chemotherapy unit from Jan 2010 to Jan 2011 were selected and their cases retrospectively reviewed to identify patients who had had a possible VTE. Analysis of onset symptoms, risk factors such as body mass index (BMI), tumour stage, menopausal status and age was carried out. Any treatment they had received for VTE was documented. At the time of the study there were no unit guidelines on the best management of these patients.
53 patients were identified. 32 patients received FEC-T. Of these, 15 patients (47%) developed symptoms suggesting possible VTE and a duplex ultrasound scan diagnosed thrombus in the upper limb on the side of chemotherapy administration. 4 (12.5%) of these were deep venous thrombosis (DVT) while 11 (34.4%) were superficial. Of the 21 patients who received FEC75, 8 (38%) developed thrombus with a total of 4 episodes of DVT and 6 of superficial thrombus. An incidence of 19% and 28.6% respectively. In the total cohort there were 8 cases of DVT (15%). The time to VTE differed between the groups. In those receiving FEC-T the median time to symptoms was cycle 2. Those receiving FEC-75 had a median time to VTE of 3 cycles. Increasing age, BMI and menopausal status did not appear to be associated with risk of VTE in this cohort.
This study suggests that a significant proportion of patients receiving FEC chemotherapy develop upper limb VTE. Other factors do not appear to be linked with the development of VTE in this cohort of patients. It is likely that the cytotoxic agents, in particular epirubicin, induce a chemical phlebitis that in some patients leads to VTE. Rapid access to scanning facilities enables differentiation between superficial and deep VTE. As a result of these findings, guidelines for the management of VTE in the upper limb associated with chemotherapy are being developed.

3054 POSTER

Determinants of Hair Preservation in Scalp Cooling

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Background: Chemotherapy-induced alopecia (CIA) is a frequent occurring side effect of cancer treatment that has high psychological impact on many patients. CIA may be prevented by scalp cooling.
Methods: Patients who received scalp cooling in 28 Dutch hospitals between January 2006 and December 2009 could participate in our registration. Scalp cooling was performed using the Paxman©PSC1 or PSC2 system. Nurses and patients completed questionnaires, reporting patient, hair, chemotherapy and scalp cooling characteristics. Scalp cooling was considered satisfying if patients did not wear a wig or head cover and scored grade $\leqslant 1$ on the scale for alopecia of the World Health Organisation (1979). Logistic regression analysis was used to examine determinants of the scalp cooling result. In these analysis, 14 examined chemotherapy regimens were grouped into anthracyclines, taxanes, sequential schemes and other schemes.
Results: The registration contained 1414 scalp cooled patients. Overall, satisfaction with the result of scalp cooling was 50%, but varied for different chemotherapy schemes and dosage from 8% (docetaxel 75 mg/m^2, doxorubicin 50 mg/m^2, cyclophosphamide 500 mg/m^2 (TAC)) to 95% (paclitaxel 70−90 mg/m^2). Multivariate analysis showed significant less satisfying results for patients older than 65 years (OR 1.6) or with Asian type of hair (OR 2.5) compared to the West-European type. Better results were observed in males (OR 0.2), for taxanes (OR 0.4) compared to anthracyclines and for post-infusion cooling times (PICT) shorter than 80 minutes (OR 0.5) compared to PICTs of 90–100 minutes. No difference in results was observed for length and mass of hair, chemically manipulated hair (dyeing, waving, colouring), dampened hair or use of conditioner before scalp cooling, cytostatic infusion times and for patients treated with chemotherapy ever before.
Discussion/Conclusion: Scalp cooling was effective in most examined chemotherapy regimens. Therefore, scalp cooling should be offered to all eligible patients with solid tumours, including males, who receive alopecia-inducing intravenous chemotherapy, with exception of TAC. This is a start of determining factors influencing the results. Two possible determinants have not been taken into account: chemotherapy dosage and scalp skin temperature. Research regarding a possible shorter PICT is certainly warranted.

3055 POSTER

Effectivenes of Brief Exercise Orientation Program on Breast Cancer Induced Fatigue

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Cancer related fatigue is a distressing persistent, subjective sense of physical, emotional and cognitive tiredness related to cancer and its

treatment that interferes with usual functioning. Studies show that exercise programs are a potentially effective and safe intervention to manage fatigue and to improve quality of life during breast cancer treatment, without causing major side effects. This study aimed to analyze the influence of a brief home based exercise orientation program on non-metastatic breast cancer related fatigue. 54 patients undergoing adjuvant or neoadjuvant chemotherapy were randomly assigned into control and exercise orientation groups. Informed consent was obtained from all participants. EORTC − QLQ C30, EORTC QLQ − BR23 and Chalder Fatigue Questionnaire were applied prior to beginning and after first chemotherapy cycle. There was no statistically significant difference in demographic characteristics between groups. The median age was 48.5 years for the control group and 52.5 for the exercise intervention group, median body mass index was 26.49 and 27.61 respectively, 57.7% of the control group and 39.3% of the exercise intervention group were classified as being pre-menopause, 61.5% and 50% of the control and exercise intervention groups received neoadjuvant chemotherapy, the remaining received adjuvant chemotherapy. Quality of life showed statistically significant decline in both groups after chemotherapy. There was a trend towards worsening Chalder Fatigue Scale after chemotherapy for both groups. The fatigue scale from EORTC − QLQ C30 demonstrated trend in improved symptom in patients from the intervention group. Fatigue incidence, in this group, was particularly low, which could be related these specific population characteristics as poor social status requiring maintenance of daily regular activities and high non recreational activity level. Despite these, there was a trend towards lower chemotherapy related fatigue in the intervention group. The present study wasn't powered to detect a small difference in fatigue incidence between groups, and as such there wasn't a statistically significant result, as the initial fatigue score was lower than expected. Even though, considering that a brief exercise orientation, a simple, fast, low cost and easily reproducible *treatment*, was the only intervention done, further studies are warranted.

3056 POSTER

Effect of Palonosetron Plus 1-day Dexamethasone (DEX) on the Prevention of Delayed Nausea and Vomiting Due to Moderately Emetogenic Chemotherapy (MEC): a Pooled Analysis of Two Phase III Trials

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Background: The strongest predictor of delayed Chemotherapy Induced Nausea and Vomiting (CINV) is the occurrence of symptoms during the first 24 hours after chemotherapy. The relationship of acute CINV and delayed CINV was explored using pooled data from two randomized trials evaluating a DEX-sparing regimen for the prevention of CINV due to MEC.
Material and Methods: A total of 624 chemo-naïve patients with solid tumours who underwent single-day MEC regimens were randomized to receive palonosetron 0.25 mg IV plus DEX 8 mg IV on day 1 of chemotherapy (n = 314) or the same followed by DEX 8 mg orally on days 2 and 3 (n = 310). Patients were categorized by the presence or absence of either acute vomiting (AV) or acute nausea (AN), and the incidence of delayed vomiting (DV) or delayed nausea (DN) was then examined between categories.
Results: Among the 544 patients across both treatment groups with no AV, no DV occurred in 96% (266/278) of patients receiving the 1-day regimen, and in 97% (258/266) of those also administered DEX on days 2 and 3 [Fisher's exact test, $P = 0.497$]. There was no difference also among the 80 patients who did have AV. 23/46 (64%) receiving the 1-day regimen had no DV while 32/44 (73%) receiving additional DEX doses had no DV [$P = 0.470$]. Of the 390 patients across both treatment groups with no AN, 129/199 (65%) receiving the 1-day regimen and 140/191 (73%) receiving additional DEX doses experienced no DN [$P = 0.080$]. A similar benefit was seen among the 234 patients who did have AN. 21/115 (18%) receiving the 1-day regimen had no DN while 23/119 (19%) receiving additional DEX doses had no DN [$P = 0.868$].
Conclusions: The similar magnitude of improvement in the prevention of delayed CINV with the DEX-sparing regimen in patients with or without acute CINV indicates that the effect of the 1-day regimen palonosetron plus dexamethasone on delayed symptoms is a pharmacologic effect and not simply a carryover effect from prevention of acute CINV.

3057 POSTER

The Efficacy of Intranasal Fentanyl Spray and Other Opioids for the Treatment of Breakthrough Cancer Pain

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Background: The objective of this analysis was to evaluate the relative clinical efficacy of the fast-acting fentanyl formulations, intranasal fentanyl spray (INFS), fentanyl pectin nasal spray (FPNS), oral transmucosal fentanyl citrate (OTFC), fentanyl buccal tablet (FBT), sublingual fentanyl citrate orally disintegrating tablets (ODT), and fentanyl buccal soluble film (FBSF), as well as oral morphine (OM), in the management of breakthrough cancer pain (BTCP).
Methods: A systematic literature review (including Medline, Embase, BIOSIS; 1996–2010) identified 10 similarly designed randomised controlled trials investigating the efficacy of INFS, FPNS, OTFC, FBT, ODT, FBSF and OM for the treatment of BTCP in adult cancer patients. The endpoint of interest was pain intensity difference (PID, reported on a 0−10 numeric rating scale) up to 60 minutes after intake. Results of all trials were analysed simultaneously using a mixed treatment comparison (network meta-analysis).
Results: INFS, FPNS, FBT and OTFC produced greater PIDs than placebo at all time points tested, with INFS providing the greatest reductions over placebo in each case: mean PID for INFS vs placebo (95% credibility interval) of 1.7 (1.4−2.0) at 15 minutes, 2.0 (1.6−2.3) at 30 minutes, 2.0 (1.5−2.4) at 45 minutes, and 1.9 (1.5−2.4) at 60 minutes. ODT and FBSF were only better than placebo from 30 minutes, and OM only from 45 minutes.
In terms of the PID for INFS relative to the other opioids, INFS was the most efficacious treatment at 15 and 30 minutes after intake, e.g., the mean PID (95% credibility interval) for INFS relative to FPNS was 1.1 (0.6−1.6) at 15 minutes and 0.8 (0.2−1.5) at 30 minutes after intake. The greater efficacy of INFS continued until 30 minutes for FPNS and FBT, 45 minutes for OTFC, and 60 minutes for ODT, FBSF and OM.
Conclusions: Based on the currently available evidence, it can be concluded that INFS is expected to provide the greatest improvement in the treatment of short-duration breakthrough cancer pain episodes. As breakthrough pain often has a rapid onset of action, the greater efficacy of INFS in the first 30 minutes seems critical.

3058 POSTER

Incident Pain in Patients Undergoing a Bone Marrow Biopsy Procedure: a Randomized, Double-blind, Single Centre, Placebo-controlled Study to Assess the Safety and Efficacy of Methoxyflurane

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Background: Methoxyflurane, self administered using a Penthrox™ Inhaler, is indicated for use in Australia in pre-hospital pain, and in the relief of pain associated with short surgical procedures This randomized, double-blind, placebo-controlled study assessed the safety and efficacy of methoxyflurane administered via the Penthrox™ Inhaler at analgesic doses in patients with cancer who were undergoing a bone marrow biopsy (BMB).
Methods: Ninety-seven of 100 randomized patients underwent bone marrow biopsy and received local anesthetic plus either methoxyflurane or placebo with pain intensity (PI) measured at 6 time points during the bone marrow biopsy using the Numerical Rating Scale. Patients, operators and research nurses rated global medication performance (GMP) at the end of the bone marrow biopsy. The State Trait Anxiety Inventory for adults was used to assess patient anxiety before and after the bone marrow biopsy.
Results: Compared with placebo, methoxyflurane significantly improved worst bone marrow biopsy PI scores ($p = 0.011$), and significantly improved pain during the aspiration component of the bone marrow biopsy ($p = 0.001$). Patients rated methoxyflurane better than placebo ($p = 0.005$). One patient in the placebo group who received rescue medication was excluded from analysis of PI assessments but included in global medication performance assessment. There were significantly more adverse events in the methoxyflurane arm than in the placebo arm ($p = 0.028$). All were grade 1 (mild), well known and reported in the product information.
Conclusion: In this study of procedural pain associated with bone marrow biopsy, methoxyflurane administered via the Penthrox™ inhaler was safe, simple to use, well tolerated and efficacious.