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Mindfulness and Cancer Patients' Emotional States across the Treatment Continuum: A Latent Profile Analysis

Individuals have been argued to demonstrate one of four heterogeneous profiles of mindfulness, each of which corresponds to a combination of different levels of each facet of mindfulness. The present longitudinal study identified profiles of mindfulness in a cohort of newly-diagnosed cancer patients in Asia, and examined the associations between these profiles and sociodemographic and medical variables, and depressive and anxious symptoms, over time.

A total of 212 patients were recruited and assessed at baseline, and at three, six, and 12 months following a cancer diagnosis. These patients completed the Short Form of the Five Facet Mindfulness Questionnaire at baseline, and the Hospital Anxiety and Depression Scale at all assessment points. Latent profile analysis was used to identify profiles of mindfulness. Four profiles of mindfulness were identified: low mindfulness (51%), judgmentally observing (24%), non-judgmentally aware (7%), and high mindfulness (18%). Although both the non-judgmentally aware and the high mindfulness profiles were associated with lower levels of depressive and anxious symptoms at baseline, the non-judgmentally aware profile was associated with higher levels of anxious symptoms at 12 months' follow-up. A majority of patients demonstrated profiles characterised by globally low levels of mindfulness, and which were associated with higher levels of emotional distress. A consideration of these profiles might allow clinicians to provide more targeted interventions to cancer patients.

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Fear of Cancer Recurrence, Emotional Distress, and Quality of Life among Cancer Survivors in Singapore: The Mediating Role of Rumination

Background

Fear of Cancer Recurrence (FCR) is a widespread problem for cancer survivors with debilitating psychosocial effects. Few studies have examined rumination as a broad-based cognitive vulnerability mechanism and its influence on psychopathology and psychological well-being in the context of FCR. This study thus sought to examine the effect of rumination on the relationship between FCR, emotional distress, and quality of life among cancer survivors in Singapore.

Methods

Participants were 404 adult cancer survivors (≥ 1 year from last treatment) who were assessed on the FCR inventory, rumination (Rumination Response Scale), emotional distress (Hospital Anxiety and Depression Scale), and quality of life (WHO Quality of Life-BREF). Based on the Structural Equation Modelling (SEM) framework, path analysis was used to examine the mediating role of rumination on two models: (1) FCR and emotional distress and (2) FCR and quality of life.

Results

Both hypothesized mediating models controlling for age, sex, cancer type, cancer stage, treatment modality, and time since treatment completion revealed that rumination mediated the relationship between FCR and emotional distress ($b = .04$, $SE = .007$, 95% CI [.028 to .054]) as well as FCR and quality of life ($b = -.128$, $SE = .024$, 95% CI [-.178 to -.083]).

Conclusions

The present study provides evidence for a mediating role of rumination between FCR and emotional distress, and FCR and quality of life. Psychological treatments should target rumination in cancer survivors experiencing pathological FCR to alleviate emotional distress, and improve quality of life. Importantly, the use of a broad-based measure of rumination suggests that application of general psychological factors to the context of cancer allows research findings to be integrated and translated to relevant psychological treatments and supportive care.

NPS – 3**Chiou Yen Koh¹, Cheng Nang Leong¹**¹ *Department of Radiation Oncology, National University Cancer Institute Singapore***Evaluating the Impact of Inpatient Accelerated Palliative Radiation Treatment Programme on Hospital Readmissions in Oncology Wards**Background & Hypothesis

Fast-track palliative services are rarely reported locally. The Inpatient Accelerated Palliative Radiation Treatment Programme implemented in 2011 had been reported to shorten palliative radiation treatment waiting time and length of stay (LOS). Despite such initiatives to shorten LOS, other studies had found that shorter LOS can potentially increase readmission rates. The main objective of this study is to evaluate the impact of the programme on hospital readmissions.

Methods

We conducted a retrospective single centre study in Radiotherapy Centre, National University Hospital. The inclusion criteria was all inpatients who had received palliative radiation treatments from August 2009 to July 2012.

Results

Among 108 inpatients studied, there were 39 (49.4%) and 16 (55.2%) readmissions pre-programme and post-programme, respectively; 15-day and 30-day readmission was higher post-programme (23.1% vs. 37.5% ; 38.5% vs. 68.8%). However, there were significantly less patients readmitted due to the same radiation oncology related medical issues post-programme in <15-day (33.3% vs. 0.0%) and <30-day (20.0% vs. 9.1%) readmission. Lower >30-day readmissions post-programme compared to pre-programme were also reported (59.0% vs. 31.3%).

Discussion & Conclusion

The data have shown that fast-track palliative care services can reduce preventable readmissions of patients who required palliative treatments. We approach these results as encouraging but preliminary. It takes multifaceted and multidisciplinary approach towards reducing readmission especially for cancer patients who require palliative care. As the demands of palliative services grow, the programme could serve as a model for other hospitals to look into the possible provision of fast-track palliative services that is currently lacking in Singapore.

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Caregiver burden, distress, and quality of life among caregivers of patients with cancer: Trajectories across the first year of diagnosis

Background

Caregivers of cancer patients often take on the caregiving role with little experience and preparation. Research has shown that caregivers may experience caregiving burden, psychological distress, and impaired quality of life (QOL). However, less is known about the sequelae of caregivers' wellbeing in the early phases of cancer survivorship. This study examines the trajectories of caregiver burden, distress, and QOL across the first year of patients' diagnosis.

Methods

Participants were 221 newly diagnosed cancer patients (Mean age (SD) = 49.21 (9.36), 67.4% female) and 116 caregivers (Mean age (SD) = 43.49 (11.82), 50% female), who completed a set of questionnaires at baseline, 6-month, and 12-month follow-up. Trajectories of caregiver burden, distress, and QOL were estimated using linear mixed models, adjusting for patients' age, gender, cancer stage, anxiety and depression, as well as caregivers' age, gender, and relationship to patient.

Results

Linear growth models showed that caregiver burden and distress did not change over time ($p > .05$), while QOL decreased over time ($B = -4.31, p = .01$). Quadratic growth models suggested that caregiver QOL decreased over time ($B = -28.63, p = .008$) with a slowing trend ($B = 6.26, p = .02$). The quadratic model provided an improved fit to the data over the linear model, supporting a decelerating trend in decreased caregiver QOL ($\chi^2(1) = 5.35, p < .05; \Delta AIC = 3.35; \Delta BIC = 0.13$). Further analyses suggested that the observed trend is driven by physical and practical concerns rather than other caregiver QOL domains.

Conclusion

Caregivers' QOL deteriorated over time despite the lack of change in caregiver burden and distress across the first year of patients' diagnosis. In particular, physical and practical concerns were the main challenge; these include difficulties adjusting to changes in routines, financial strain, and impaired sleep. More targeted support can be provided to meet the needs of caregivers.

NPS – 5

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To create an electronic calculator to calculate the costs of chemotherapy regimen to aid pharmacists in answering drug-price enquiries

Pharmacists at the Pharmacy @ NCIS, NUH, calculate the cost of chemotherapy regimen manually when they receive queries from doctors through calls. This is a very tedious and time consuming process which disrupts their original workflow and increases the likelihood of medical errors. Furthermore, manual calculation are prone to calculation errors, potentially resulting in inaccurate prices provided to doctors. Hence, this project aims to create an electronic calculator designed to calculate the cost of chemotherapy regimen, enabling pharmacists to provide accurate financial cost to doctors.

The electronic calculator was developed using Microsoft Excel, validated and implemented at the pharmacy @ NCIS. Feedback from the 12 pharmacists were obtained through a series of surveys. It was seen that most were positive towards the implementation of the electronic calculator. 91.6% of pharmacists indicated the calculator to be effective. There was a reduction of 93.3% in the time taken to calculate the cost of chemotherapy electronically versus manual calculation. Hence, the duration of calls with doctors was also reduced. However, the level of disruption was only slightly decreased. In summary, it contributes to the optimization process of calculating the cost of chemotherapy regimen in the pharmacy and patient safety.

NPS – 6

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Impact of Oncology Information Systems on Radiation Oncology ProductivityBackground

Oncology Information Systems (OIS) is a key component in radiation oncology departments worldwide. It is the workflow managing and data reporting systems for either research or operation needs. At the institution, we have adapted each a fully integrated OIS and an open OIS for the 2 Radiotherapy Centres (RTC) under our wing. Our aims are to evaluate the impact of the 2 OIS on our clinical work productivity.

Methods

To illustrate this, a workflow chart was created based on a patient's journey at the institution where both RTC adopted an identical workflow. 100 cases of patient data were used to simulate the clinical workload which included 50 3D conventional cases, 34 IMRT/IGRT cases, 8 Stereotactic cases and 8 Motion management cases. The patient's journey were divided into 7 steps (First Consultation at RTC ◊ CT Simulation and 1st Day Treatment Appointment Bookings ◊ CT Simulation ◊ Radiotherapy Treatment Planning ◊ Data Information Transfer for delivery of radiation treatment ◊ Quality Assurance checks ◊ Start of Radiotherapy treatment and Doctors Review). Differences in the total overall time were evaluated as a surrogate of productivity between the 2 OIS.

Results

Differences in time savings were found in Steps 2, 5 and 7. For the 100 cases data collection, we encountered an average overall time savings of 29.1 minutes for each case by using the fully integrated OIS as compared to the open OIS. The total time savings to complete the 100 cases were 2910 minutes which was further translated into 28% productivity improvements in the scenario projected.

Conclusion

Both OIS met our clinical operation needs. Based on the 28% increased productivity, the fully integrated OIS system had positive gains for the user. Other aspects in the OIS such as data reporting capabilities to support research or operation statistics were not included in the evaluation, which could also contribute to overall clinical work productivity.

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Survivor Unmet Needs and Fear of Cancer Recurrence in Singapore

Background/Purpose

Past work has shown significant positive associations between survivors unmet needs (SUN) and the fear of cancer recurrence (FCR); few, however, have attempted to verify these relationships in Asian settings. The present study sought to investigate the cross-sectional relationships between SUN and FCR.

Methods

Data from 355 cancer survivors (≥ 1 year from last treatment) from a larger study on survivorship in Singapore were analysed. Participants completed the the short form of the SUN Scale (SF-SUNS) and the FCR Inventory (FCRI). Bonferroni-corrected Pearson's r were calculated for the total FCRI and SF-SUNS as well as the subscales.

Results

Significant positive correlations were discovered between the total SF-SUNS and FCRI scores ($r=.48$, $p<.001$). Subsequent analyses revealed that this relationship was consistent ($r_s=.17-.45$, $ps<.05$) across the four subscales of the SF-SUNS (unmet information needs, unmet work and financial needs, unmet needs for access and continuity of care, and unmet coping, sharing, and emotional needs) and the seven subscales of the FCRI (triggers, severity, psychological distress, functioning impairment, insight, reassurance, and coping strategies).

Conclusions

Findings from the present study reaffirms the strong relationship between SUN and FCR in Asia. While addressing all the components of FCR may require more intensive emotional work for both survivors and providers, institutional-level efforts aimed at meeting these SUNs may not only alleviate the burden on these healthcare professionals but also inadvertently improve survivors' FCR and potentially other long-term prognostic outcomes.

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Fear of Cancer Recurrence and Emotional Distress in Asian Cancer Survivors: Possible Use of FCRI as a Screening Tool for Subclinical Emotional Distress

Background/Purpose

The fear of cancer recurrence (FCR) has been shown to be related to emotional distress, but few have verified these relationships in Asian settings. The present study sought to (1) examine the cross-sectional relationships between FCR and emotional distress, as well as (2) identify the suitability of the FCRI Inventory (FCRI) and its Severity (FCRI-SF) and Psychological Distress (FCRI-PD) subscales as screening tools for emotional distress.

Methods

Data from 396 (92%) cancer survivors (≥ 1 year from last treatment) that completed the FCRI and Hospital Anxiety and Depression Scale (HADS) from a larger study on survivorship in Singapore were analysed. Correlations and receiver operating curve (ROC) analyses were conducted using HADS ≥ 15 as a cut-off for FCRI total, FCRI-SF, and FCRI-PD scores.

Results

Significant positive correlations were discovered between FCRI total as well as its seven subscales scores and HADS ($r_s = .27 - .61$, $p_s < .001$). ROC analyses revealed moderate but significant area under curve estimates (AUCs = .82 - .83, $p_s < .001$). A cutoff of 72/73 on the FCRI was found to be adequate (sensitivity=71%, specificity=79%, PPV=42%, NPV=93%). A cutoff of 14/15 on the FCRI-SF was found to be adequate (sensitivity=75%, specificity=73%, PPV=37%, NPV=93%). A cutoff of 5/6 on the FCRI-PD was found to be adequate (sensitivity=78%, specificity=73%, PPV=38%, NPV=94%).

Conclusions

This is one of the few Asian studies that have reaffirmed the relationship between FCR and emotional distress. Findings also suggest that the FCRI, FCRI-SF, and FCRI-PD may serve as adequate screening tools for identifying subclinical emotional distress in the absence of administering HADS.

NPS – 9

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Pre-habilitation in a severely malnourished patient with stage 4 sigmoid adenocarcinomaBackground

Pre-operative functional and nutritional optimization results in better outcomes (e.g. reduction in length of hospital stay and post-operative complications) for patients with colorectal carcinoma.

Methods

A 56 year old gentleman with a history of chronic alcoholism was diagnosed with moderately differentiated sigmoid adenocarcinoma with metastasis to the lung and the liver. Surgery with curative intent was held off due to severe malnutrition with starvation ketosis and poor physical fitness. He was admitted to a community hospital for functional and nutritional optimization. Nutritional supplements and protein-rich therapeutic diets were prescribed along with physiotherapy which included strength and endurance training and group therapy. Psychosocial support was also rendered. Patient was discharged with community support and a home exercise plan which included static strength, balance and endurance training. He was also encouraged to volunteer at the hospital's gym to improve social participation.

Results

Weight increased from 38.4kg to 43.9kg, while albumin increased from 28 to 32 g/L during his community hospital stay. Refeeding syndrome was not observed for this patient. Endurance increased from 230 to 460m on the 6 minute walk test. Sit to stand test timing decreased by 38.5%, timed up and go test timing improved by 50%, while the 4-square step test improved by 26.7%. Berg Balance Score increased from 43 to 56. Patient underwent laparoscopic high anterior resection with neoadjuvant chemotherapy. There was no major post-operative complication and he was discharged one week post-operation.

Conclusion

Trimodal pre-habilitation involving nutritional, psychosocial and physical interventions by a multidisciplinary team is effective in improving musculoskeletal function and endurance, and minimizing post-operative complication rates.

NPS-10Yao Yao^{1,2}, Lim Siew Woon^{1,2}*1 Department of Pharmacy, National University Health System**2 National University Cancer Institute, Singapore***Medication adherence to capecitabine in patients with colorectal cancer receiving capecitabine-containing regimens**Background

Non-adherence to anti-neoplastic agents is associated with lower tumor response rates and increased mortality. The aim of this study is to determine the adherence rates to different capecitabine regimens that are used for treatment of colorectal cancer in National University Hospital and identify risk factors in patients who are non-adherent to their capecitabine regimens.

Method

In this retrospective cohort study, patients who were newly started on capecitabine containing regimens for the treatment of colorectal cancer from January to December 2015 were included. They were followed up for 6 weeks or until capecitabine treatment was discontinued or completed, whichever came first. Medication refill records were reviewed. Adherence to capecitabine was measured using the adjusted medication possession ratio (aMPR), which is defined as the total number of days of capecitabine tablets supplied during the study period subtracted by the number of days of missed doses then divided by the planned treatment period. An aMPR ≥ 0.95 was considered to be adherent to the capecitabine regimen.

Results

A total of 121 patients were included in the study. 114 (94.2%) patients achieved aMPR ≥ 0.95 . Adherence rates were 94.7%, 97.2% and 85.7% for capecitabine monotherapy (18/19), combination regimen with oxaliplatin (XELOX) (72/74) and combination regimen with radiotherapy (24/28) respectively. aMPR > 1 was also observed in 3 patients on the chemoradiotherapy regimen but not in monotherapy and XELOX regimens. No risk factors for non-adherence were identified, although the common characteristic of patients who were non-adherent to their capecitabine regimens was the presence of side effects.

Conclusion

Adherence to capecitabine therapy in the study population was lowest in the combination regimen with radiotherapy. Further studies would be required to identify those at risk of non-adherence and develop interventions to improve adherence in this group of patients.

NPS-11

Wan qin Chong, Mogro Maria Jannet, Bee Choo Tai, Soo Chin Lee

Use of decision aid to Improve Informed Decision-making and Communication with Physicians on the Use of Oral Complementary and Alternative Medicine (CAM) among Cancer Patients on Chemotherapy Treatment: Preliminary Results of A Randomised Controlled Trial

Background

Complementary and Alternative Medicine (CAM) is a group of healthcare practices and products that are not considered conventional medicine. Locally, CAM is widely used, yet some patients do not report its use to their oncologists. This is worrying as concomitant oral CAM and chemotherapy use may result in adverse drug-herb interactions. We hypothesize that a decision aid may help to increase rational use of oral CAM during chemotherapy among our cancer patients.

Methods

We plan to randomise 240 patients initiating chemotherapy and who are not taking oral CAM to receive either a decision aid or none on a 1:1 ratio. Questionnaires are administered before chemotherapy (visit 1), 1 month later (visit 2) and 3 months later (visit 3). The primary endpoint of this study is the decision conflict score (DCS). A lower DCS measures patients' certainty and satisfaction with their decision made on CAM use during chemotherapy. Secondary endpoints include the prevalence of discussion with oncologists on CAM use and patients' decision regret score (DRS) on CAM use.

Results

177 patients were recruited between October 2014 and April 2017: 99 to the intervention and 78 to the control arm. 142 and 109 patients completed questionnaires at visits 2 and 3 respectively. There was no significant difference in the mean DCS (37.0 vs 36.6, $p=0.11$) and mean DRS (23.4 vs 27.8, $p=0.23$) between the intervention and control arms. Fewer patients in the intervention arm consumed CAM during chemotherapy (7/79 [8.9%] vs 8/63 [12.6%] at visit 2, $p=0.59$; 4/66 [6.1%] vs 11/43 [25.6%] at visit 3, $p=0.19$), and more patients in the intervention arm informed their oncologists of CAM use compared to the control arm (4/7 [57%] vs 3/8 [37.5%] at visit 2, $p=0.62$; 3/4 [75%] vs 1/11 [9.1%] at visit 3, $p=0.033$).

Conclusions

Preliminary results suggest that a decision aid may reduce CAM use among cancer patients and encourage them to discuss CAM use with their oncologists.

NPS-12

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Advanced Practice Nurse (APN)-led Symptom Review Clinic – adding value to cancer careBackground

Nurse-led symptom review clinics are increasingly being recognized to value-add by reducing waiting time and improving organization of cancer care. At the NCIS Ambulatory Cancer Centre, an APN-led symptom review clinic was piloted targeting adult patients scheduled for chemotherapy. The aim of the project is to evaluate the feasibility of nurse-led clinic in improving care.

Methods

Data was collected from October 2016 to February 2017. Protocols for escalation to doctor review were endorsed. The APN assesses patients presenting with symptoms, reviews laboratory results for chemotherapy, manages chemotherapy related side-effects and venous catheter complications.

Results

230 patient episodes were attended to by the APN. The median age was 55 years (range 21-88) and they consisted of breast cancer (29%); hematological malignancies (25%); colorectal (7%); lung (10%); gynecology (10%); gastrointestinal (10%); head and neck (5%) cancers and others (4%). The main reasons for review included: symptom management (60%), management of central-line related complications and removals (27%); and treatment related complications (5%) and others (8%).

The three commonest symptoms reported were fever (19%), rashes (13%) and a combination (16%). Of all the cases, only 13% required doctor's review while 50% were managed by APN with phone consultation with the doctors. 37% cases were independently managed by the APN. Cases which required admission included mental altered mental status and suspected sepsis.

Of the 133 patients planned for treatment, 74% of the cases proceeded to receive treatment after APN assessment while 26% s required postponing of therapy. Of the 27 cases presented with fever, 19 of them avoided admission and were managed as outpatient.

Conclusions

The APN-led symptom review clinic delivers prompt assessment and symptoms management. It provides a cost-effective care delivery model and improves overall patient experience.

NPS-13**Xinmei Shi¹***1 Department of Radiation Oncology, National University Health System***Interventions to Enhance Patient Understanding in Cancer Clinical Trial Participation: A Literature Review**Background

Patients' genuine understanding of clinical trials and the provision of true informed consent remains a major challenge. Various types of interventions to improve the informed consent process have been reviewed. This review aims to evaluate the effectiveness of consent interventions in improving cancer subjects' knowledge and satisfaction.

Methods

A systematic review of articles published between 2008 and 2017 was conducted. Databases (PubMed, Medline, EMBASE and CINAHL) were used to identify research studies according to the following inclusion criteria: (a) randomised controlled trials which addressed informed consent interventions; (b) involved adult cancer patients considering oncology trials; (c) evaluated subjects' knowledge of clinical trials; (d) reported in English. Published literature were critically analysed for study rigour according to the Cochrane Handbook.

Results

Ten randomised studies met the inclusion criteria, of which seven involved multimedia interventions and three involved extended forms. Interventions were either conducted alone or in tandem with other provided relevant information. Few studies made use of standardised tests to measure knowledge and satisfaction, while questionnaires developed by the study teams differed in authorship. The studies showed inconsistent effects of interventions on participant knowledge and understanding of clinical trials. However, satisfaction with the interventions in terms of perceived understanding, attitude towards clinical trials, or intention to participate, was high overall.

Conclusion

Consistent and corroborated evidence of success in any one consent intervention was not shown. Future studies will have to take into account the limitations of existing studies to address the paucity in participant knowledge and understanding in clinical trials.

NPS-14

Shortlisted for Oral Presentation

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Improving medication adherence with adjuvant aromatase inhibitor in women with breast cancer: preliminary results of a randomised controlled trial to evaluate the effect of short message service reminder

Background

Medication adherence is a concern in long term treatment. Inadequate medication compliance can result in reduced benefits and increased risks. There is limited evidence on the efficacy of mobile phone intervention in improving medication adherence of oral aromatase inhibitor (AI) therapy. We examine the effect of short message service (SMS) reminder in improving medication adherence and inhibiting the aromatization process amongst breast cancer women receiving oral AI.

Methods

In this randomised controlled trial, 280 eligible subjects are equally randomised to receive either SMS reminder or standard care. The former receives weekly SMS reminder to take medication while the latter does not receive any message. The primary endpoint of medication adherence is assessed using a Simplified Medication Adherence Questionnaire. Secondary endpoints include estrone, estradiol and androstenedione measures. These outcomes are compared at one-year, adjusting for baseline differences.

Results

A total of 137 patients were enrolled between 27 May 2015 and 2 May 2017. Baseline demographic and clinical characteristics were balanced in the two groups. Eighty-eight participants who had completed one-year follow-up contributed to the analysis of primary endpoint. Assay of androstenedione was available for 77 patients at baseline and one-year, while that of estrone and estradiol were completed for 15 and 52 patients respectively. There was a 31% increase in odds of medication adherence in SMS group as compared to the control (adjusted OR=1.31, 95% CI 0.50 to 3.42). At 1-year, the estrone level in the SMS group was 14% lower than the control (adjusted relative mean difference 0.86, 95% CI 0.62 to 1.19). There was little difference in androstenedione and estradiol levels at one-year between the two interventions.

Conclusion

Implementing innovative technology to improve medication adherence at the point of care may improve short term clinical outcomes based on hormone assays.

NPS-15

Shortlisted for Oral Presentation

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7 Neurology, Kantonsspital Lucerne, Switzerland

Cryocompression for the prevention of taxane-induced peripheral neuropathy

Background

Peripheral neuropathy (PN) is a common dose-limiting toxicity of taxane chemotherapy. We have previously demonstrated that peripheral limb hypothermia during chemotherapy reduces the severity of paclitaxel-induced PN. In this study, we investigated the potential of cryocompression in improving the therapeutic effect in ameliorating taxane-induced neurotoxicity.

Methods

Cancer patients undergoing taxane-based chemotherapy underwent limb cryocompression at 16°C for the duration of each infusion. Skin temperature and tolerability were assessed hourly during each cycle and nerve conduction studies were performed at baseline, end of chemotherapy and 3 months post treatment. Results were compared with our previous study employing limb hypothermia (without compression) at 22°C. In both studies, patients received 2.5 hours of limb hypothermia/cryocompression with each paclitaxel infusion for a maximum of 12 cycles.

Results

Thirteen patients underwent a mean of 11 cycles (range 6-12) of cryocompression at 16°C. Both hypothermia and cryocompression were well tolerated by patients, with no premature termination of cooling due to intolerance. Limb hypothermia achieved a mean skin temperature decrease of 1.4°C. Cryocompression achieved a significantly larger mean skin temperature decrease of 4.0°C ($p = 5e-06$). The tibial medial plantar (TMP) and common peroneal nerve (CP) amplitudes were significantly preserved in limbs following cryocompression compared with the uncooled limbs (TMP: -34.6 ± 32.3 % [cooled] vs -59.5 ± 24.1 % [control], $p = 0.02$; CP: 8.1 ± 21.4 % [cooled] vs -19.5 ± 33.0 % [control], $p = 0.004$). On the other hand, these nerve amplitudes were not significantly preserved in the hypothermia cohort (TMP: -54.8 ± 21.8 %, $p = 0.39$; CP: -4.8 ± 25.8 %, $p = 0.06$).

Conclusions

Cryocompression is better tolerated and allows for limb cooling at lower temperatures, resulting in larger preservation of nerve conduction amplitudes in sensory and motor nerves.

NPS—16**Ang Kai Lin Elaine¹ , Yong Woon Chai²**¹ *Department of Nursing, National University Cancer Institute, Singapore*² *Department of Haematology-Oncology, National University Health System (NUHS)***Use of reverse clysis in managing lower extremity oedema: A case report**Background

Lower limb oedema is a prevalent symptom in patients with advanced cancer and often refractory to medical therapy in the last weeks of life. The common causes may include hypoalbuminaemia, lymphoedema, deep vein thrombosis, heart failure, medications and reduced venous outflow from pelvic tumours. There have been documented significant psychological, social and physical implications on an individual's quality of life (1). This is the first report in Singapore on the use of subcutaneous drainage for a patient with lower limb oedema.

Methods

Patient was seated to promote pooling of serous fluids in the subcutaneous tissues of bilateral feet. Right foot was chosen as it was more oedematous. 18G / 20G B Braun Introcath[®] catheter was inserted into the subcutaneous space of patient's right forefoot under aseptic technique. Manual aspiration was performed using a 20cc Terumo syringe before connecting to a Baxter IV drip set and sterile urine bag for collection. Manual compression was performed to direct flow of subcutaneous fluids towards site of catheter insertion. This was carried out over 48 hours and terminated as patient was dying.

Results

A total of 1135ml of serous fluids was drained after 48 hours. There was a 2cm and 2.5cm difference between right and left lower limb at the tibia and 20cm below tibia. Left lower limb was noted to be more oedematous compared to the right prior to drainage. Hence, it is inferred that there is at least 2cm decrease in circumference of calf size post drainage.

Conclusion

The use of subcutaneous drainage was first reported by Clein and Pugachev in 2004 (2). The technique was modified and included i) manual aspiration; ii) massage to drain fluids; and iii) single point entry of insertion rather than multiple points with connecting drains. Data will be collected more systematically in subsequent cases including measurement of calf sizes or area of oedema prior to drainage and over the period that procedure was carried out.

NPS-17

Shortlisted for Poster Award Presentation

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Are we neglecting the spouses of colorectal cancer patients: Emotionally and Oncologically?

Background

Spouses are a closely knitted social entity who often share similar lifestyle habits. If a partner were to be diagnosed with Colorectal Cancer (CRC), it is unknown if the event would spur their spouses to take up screening. This study aims to explore spouses' perspectives on screening for CRC.

Methods

A qualitative study using semi-structured interviews were conducted on spouses of CRC patients using open-ended questions via a phenomenological approach until data saturation was encountered. The data were thematically analysed.

Results

Fifty spouses were recruited for the study between January 2016 and February 2017, with a median age of 60 (range: 41 – 82) years. Data saturation was encountered at the 48th participant and 4 main themes emerged.

(1) Knowledge and attitudes about CRC screening in average risk population

Spouses of CRC patients understood the screening guidelines and its messaging put forth via the Health Ministry's public education campaign. Interest and awareness of the topic increased after their spouses' diagnosis. Participants viewed lifestyle changes as a method to prevent CRC.

(2) Health promotion efforts of CRC screening

Proactive modes of communication are perceived to be required in the dissemination of health awareness information on the main stream media. There is a need for active engagement between the public and the government.

(3) Barriers towards CRC screening

These include (i) procrastination, (ii) fear, (iii) invulnerability, (iv) inconvenience and (v) cost.

(4) Need for mutual spousal support.

Mutual spousal support was sufficient after knowledge of the cancer diagnosis to tide them through the difficult times.

Conclusion

Attention directed heavily on CRC patients may result in a lost opportunity to intervene and increase CRC screening uptake amongst spouses. Spouses also experience immense emotional struggles and should be supported as well during the journey of the patient.