PV-0369 Tiredness, pain and quality of life for patients receiving RT for spinal cord compression

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Purpose or Objective
Not much is known about short-term impact of radiation therapy (RT) for spinal cord compression (SCC) on patients' (PT)s' quality of life (QoL). This study aimed to determine pain, tenseness, tiredness, trouble taking a short walk, worry and QoL, in patients receiving RT for SCC.
Material and Methods
This prospective, single-institution study included thirty patients, who received RT for SCC delivered as 10 fractions of 3 Gy. Volumetric modulated arc therapy (VMAT) with daily cone beam CT image guidance was used; and PT's were followed up weekly for up to 7 weeks, using the mBPI, ESAS and EORTC QLQ-C30 questionnaires. The first follow-up (baseline) was done prior to first RT treatment delivery and PTs were contacted by phone or personal interview. The EORTC QLQ-C30 questionnaire scores PTs' pain, tenseness, tiredness, trouble taking a short walk and worry on a scale from 1 to 4 (where 1 "is not at all" and 4 is "very much"). QoL was scored on a scale from 1 to 7 (1 was no QoL, 7 the best possible). Inspired by King et al. we considered a difference in scores of 7.5 clinically significant for the EORTC QLQ-C30 scales (King MT. The interpretation of scores from the EORTC quality of life questionnaire QLQ-C30. Qual Life Res 1996; 5(6): 555-67). The change from baseline was determined.
Results
Twelve female and eighteen male PTs of median age 67 (range 39-84) were included, with prostate (8), breast (4) or lung (4) cancer as the most common primary diagnoses. Median length of follow-up after treatment start was 7 weeks (10 PTs followed for less than 4 weeks, 4 for only 1 week). Change from baseline was determined for each individual PT, and average change estimated at each time point. On average, PTs had less pain (all time points after start of treatment), with the main improvement around week 3, and then regressing back towards the baseline, see Figure 1. Additionally, they were less tense (weeks 5-6), had less difficulty taking a short walk outside (weeks 5-6 after start) and were less worried (all time points) than at baseline, see Figure 1. None of these changes were clinically relevant, based on the King et al interpretation of scores. No clear trend was seen for tiredness. Overall QoL initially improved (weeks 2-3), but then deteriorated back to baseline, although some subsequent improvement was seen in week 7.
Conclusion
After starting RT for SCC, PTs had less pain, were less tense, had less difficulty in taking a short walk outside, were less worried and had initial better QoL with the greatest improvements seen at week 3 after starting RT.

Figure 1. The average change from baseline in pain, tenseness, tiredness, worry, the ability to take a short walk outside and QoL. For QoL, a positive change from baseline indicates an improvement in QOL. For the other parameters, negative change from baseline indicates that the patient feels better (more able to take a short walk outside, less pain/tense/tiredness/worried).

PV-0370 Europe Holds its Breath – A deep inspiration breath hold technology and left breast cancer survey

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Purpose or Objective
The dosimetric benefits and inferred improvement in quality of life associated with deep inspiration breath hold (DIBH) when treating breast cancer patients are documented in the literature. However there is little published about the resource requirements of DIBH in everyday practice. This project aimed to document the current practices of DIBH in Europe; how technology and protocols impact treatment duration. Filling this knowledge gap could encourage the implementation of DIBH increasing its availability to patients.
Material and Methods
An online survey was developed and issued to all radiation therapy centers on the continent of Europe. Technology, local practice, and protocols were analysed. Appointment duration for DIBH and non DIBH were compared to quantify resource implications. Thematic analysis was used on the patient criteria responses.
Results
172 responses from 26 countries met the criteria, 129 used DIBH when treating left breast cancer. Due to heterogeneity and small sample size quantitative statistics were not possible.
Patients ability to breath hold for 20 seconds was the most common patient selection criteria reported.
Infrared cameras, specifically Real time Position Management™ (RPM) (Varian Medical Systems Inc., USA) was the most frequently reported method or technology used to deliver DIBH. [fig 1] Literature shows RPM can be used with a variety of planning systems, CT's and linear accelerators; as such the decision of technology used to deliver DIBH does not appear to be limited by the respondents existing equipment. The majority of respondents reported using one CT appointment for planning, either taking DIBH only scans or both DIBH and non DIBH scan at the same appointment. Nearly half of respondents reported using audio coaching, utilising the existing intercom in the control room rather than installing additional equipment.
The mean treatment appointment duration was 19 minutes 37 seconds. Stratified by technology, its impact on appointment duration was quantified. [table1] Using infrared cameras reported the shortest appointment time at 19 minutes, where additional technology was not required to deliver DIBH e.g. VM/VDIBH a similar appointment duration and standard deviation was reported. The mean duration of DIBH appointments and non DIBH appointment duration were also compared by technology type. The difference between them quantified the increase in resource requirements more clearly than comparing technology alone. [table1]
Fig.1 Technology used to deliver DIBH