

The impact of comprehensive geriatric assessment in NSCLC patients treated with SBRT

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	Patient A	Patient B
Age	65 y	55 y
Sex	Male	Female
Type of CIED	ICD	ICD
Manufacturer	Biotronik	Medtronic
CIED location	Left chest	Left chest
Type of cancer	Lung	Lung
Treatment region	Chest	Chest
Location of the tumor	LUL and mediastinal N	RUL and mediastinal N
Photon Energy	6 -18 MV	18 MV
Radiation dose absorbed by the CIED	2.1 Gy	2.1 Gy
Reprogrammed	Yes	No
Replacement	No	Yes

CIED: cardiac implantable electronic device; ICD: implantable cardioverter/defibrillators; GTV: gross tumor volume; RUL: right upper lobe; LUL: left upper lobe; N: lymph nodes

Conclusion

In our study nearly 2% of patients with CIEDs had experienced a damage of the device, all of them from high-risk patients subgroup (15% in the neutron-producing RT and 4.1% in chest-neck RT). Close cooperation between radiation oncologists, cardiologists, medical physicists and radiation technicians is needed to achieve the best practice management in these patients

PO-0852 Adjuvant breast EBRT in elderly patients: toxicity results with an hybrid IMRT class solution

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Purpose or Objective

Elderly patients may have a scarce compliance to prolonged radiotherapy treatment. An hypofractionated treatment, by reducing the number of fractions, could be better accepted in this frail setting. Aim of the present analysis was to evaluate acute (TAC) and late cutaneous (TTC) and subcutaneous (TTSC) toxicity of a whole breast irradiation with simultaneous integrated boost using an hybrid IMRT class solution in a subgroup of elderly patients enrolled in the clinical study (MARA-3).

Material and Methods

Patients > 70 years with low-moderate risk of recurrent disease (no positive nodes nor close resection margins) were enrolled in MARA-3 trial and treated with HMRT plans that were inversely optimized by combining two open fields with six-eight subfields in two tangential beams. Open fields were setup to include the whole breast with a 2 cm flash region and to carry the 80% of beams weight. Primary endpoints were TAC, TTC and TTSC scored by RTOG-EORTC scale. Secondary endpoints were local control and overall survival. All patients received 40Gy (2.5 Gy/fraction) to the whole breast and an additional simultaneous 4 Gy (2.75 Gy/fraction) to the tumour cavity over 16 fractions.

Results

40 patients (median age: 74.5, range: 71-84; pT1N0: 85.0%, pT2N0: 15.0%) were selected and analyzed. The incidence of TAC was: G1: 35.0%, G2: 20.0%. No G3 acute skin toxicity was observed. The 18 months any grade late cutaneous and subcutaneous toxicity free survival were 62.9% and 65%, respectively. No G3 TTC nor TTSC were observed. With a 24-months median follow-up (range: 4-92), no patient showed local recurrence or lymph nodal disease.

Conclusion

An hybrid IMRT class solution in elderly patients seems to be tolerable and safe with negligible severe TAC as well as TTC and TTSC and an excellent local-regional control.

PO-0853 The impact of comprehensive geriatric assessment in NSCLC patients treated with SBRT

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Purpose or Objective

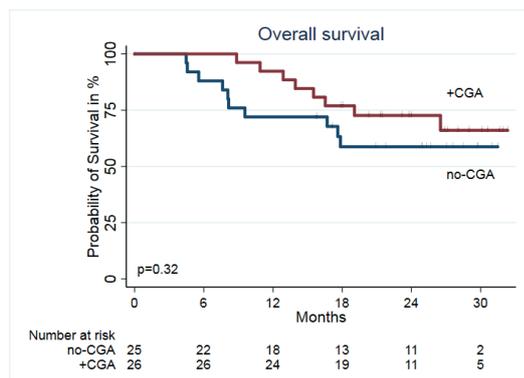
A comprehensive geriatric assessment (CGA) has been found to improve overall survival (OS), quality of life (QoL) and functional capacity in older people with non-malignant diseases when admitted to hospital. However, there are no studies on the contribution of a CGA for frail patients with localized non-small cell lung cancer (NSCLC) treated with stereotactic body radiation therapy (SBRT). At our institution a randomized study was performed to investigate whether CGA added to SBRT for patients with localized NSCLC impact OS, QoL, and any unplanned hospital admission. Previously, we demonstrated that a CGA for patients with localized NSCLC treated with SBRT did influence QoL after SBRT. The aim of this part of the study was to investigate unplanned hospital admission not related to lung cancer after SBRT, and the overall survival.

Material and Methods

From January 2015 to June 2016 51 patients diagnosed T1-2N0M0 NSCLC were enrolled. The patients were randomized 1:1 to receive SBRT ± CGA. Patients had oncological follow-up at 5 weeks, and then every third months. Information on unplanned admissions not related to lung cancer at any department during the first year after SBRT was obtained from medical records. The prevalence of unplanned admissions was compared using the χ^2 -test. OS was analyzed by Kaplan-Meier methods and compared with log-rank test.

Results

26 and 25 patients were randomized in the groups ±CGA, respectively. 4 patients dropped out. No differences in patient characteristics between groups were observed. In total, 25 patients had one or more unplanned admissions (range: 1-6 vs. 1-5 admissions in the groups ± CGA, respectively). There was no statistically significant difference in unplanned admissions 46% vs. 52% (p=0.68), or in the median stay at hospital 5.5 vs. 5.0 days in the ± CGA groups, respectively (p=0.62). The 1-year and 2-year OS was 92% vs. 72% and 69% vs. 59% for the groups ± CGA, respectively (p=0.32, figure 1).



Conclusion

CGA had no impact on the prevalence of unplanned admissions or length of stay at hospital in patients treated with SBRT for localized NSCLC. Overall survival was higher in the +CGA group but not statistically significant. Further studies are required to explore if CGA may prevent early death after SBRT for patients with localized NSCLC.

PO-0854 Elderly patient, radiotherapy, quality of life: is Vulnerable Elders Survey 13 a tool for frailty?

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Purpose or Objective

To develop a simple method to identify vulnerable older cancer people who have to undergo radiotherapy. The Vulnerable Elders Survey (VES-13) is a simple function based frailty screening, widely used in oncology, but its role in radiation therapy is poorly investigated at the time. Vulnerability assessment of geriatric patients with cancer may contribute to improved anti-cancer treatment with maximal results and minimal side effects.

Material and Methods

From October 2016 to June 2017 patients aged > 70 years with a diagnosis of solid cancer are enrolled in this prospective study. VES-13 was delivered at the beginning of radiotherapy, at the end of treatment and at 3 and 6 months later. Patients performed palliative or radical radiotherapy and could be associated with chemotherapy or hormonotherapy. We evaluate whether VES-13 score is associated with completion of radiotherapy, grade 3-4 toxicity and if it was related to a tumor site or to hospitalization within 6 months of treatment.

Results

The study involved 63 patients (mean age 77.2, range 70-92) of whom 40,0% were female. VES-13 identified 39 patients (61%) as vulnerable with a score >3. There have not been grade 4 toxicity. Grades 3 acute toxicities were more prevalent in the vulnerable subjects ($p < 0.006$). 7 patients (4.4%) did not complete radiotherapy. These patients had higher VES-13 score compared to those who completed the treatment. The association between higher VES-13 scores and non-completion of radiotherapy was independent of radical or palliative radiotherapy and presence of G3 side effects. Head and neck and brain cancer showed a worsening of the VES13 score at the end of radiotherapy with a trend of statistical significant. Patients receiving palliative radiotherapy scored higher on the VES-13. At 3 and 6 months there is no significant improvement in VES-13 score.

Conclusion

In this prospective observational study, we assessed the value of the VES-13 score in predicting the completion of prescribed radiotherapy in elderly patients with cancer.

The VES-13 has been used as a simple tool for assessing the vulnerability of older people in various clinical settings, with higher scores reflecting greater risk of health deterioration. This survey can be also used to predict complications and mortality in injured older adults who were hospitalized. These vulnerable older adults would definitely benefit from a more carefully planned treatment strategy and/or multidisciplinary supportive care. Patients receiving palliative radiotherapy scored higher on the VES-13. This could be attributed to their advanced disease stage and/or to psychological reasons, both leading to poorer self-estimations of general health status and, thus to higher VES-13 scores.

PO-0855 Age does not affect the benefit of modern chemoradiation for LA-NSCLC patients

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Purpose or Objective

The standard of care for inoperable stage III non-small-cell lung carcinoma (NSCLC) is concurrent chemoradiation which achieves the better results but is affected by higher toxicities. Even if literature data document a significant advantage also for elderly population, these selected group of patients is usually underrepresented in randomized trials. This study analyzed treatment and outcomes at our institution according to elderly (>70 years old) or younger (≤ 70 years) age.

Material and Methods

A secondary analysis on patients with stage III NSCLC treated between January 1992 and September 2014 with concurrent chemoradiation with radical intent enrolled in previous published trials in our institution were analyzed. Factors analyzed included Eastern Cooperative Oncology Group Performance Status (ECOG PS), sex, stage, histology, treatment period and esophageal and lung toxicities.

Results

A secondary analysis on 347 patients (≤ 70 years: 188; >70 years: 159) with stage III NSCLC treated with concurrent chemoradiation enrolled in previous published trials in our institution were analyzed (age range, 39-92 years). Elderly patients were more frequently male (85% and 72%; $p = 0.003$) and stage IIIB (49% and 34%, $p = 0.008$). ECOG was 0-1 in all cases (elderly: 36% and 29%, $p = 0.451$). No differences were reported according to tumor histology.

Median survival was similar between the younger and elderly patients (20,8 and 19,2 months respectively; $p = 0.503$).

A significant difference in overall survival was appreciated according to treatment period also for elderly population. Overall survival of all patients treated between 1992-2005 and 2006-2014 was 17,8 and 25,9 months, respectively ($p < 0.001$). According to the same periods, elderly group survival was 16,5 and 24,9 months ($p = 0.002$).

No significant differences were reported in esophageal and lung toxicities between elderly and younger patients (Esophageal G2: 18,6% and 21%; Esophageal G3: 1,7% and 2,6%; Lung G2: 6,4% and 6,3%; Lung \geq G3: 5,7% and 3,1%, respectively).

Conclusion

In this series elderly patients in clinical good condition with locally advanced NSCLC treated with concurrent chemoradiotherapy reached interesting results in terms of overall survival without increased toxicity. The improved outcome obtained in younger patients in the modern era is achievable also for this selected elderly population.