ONCODAILY MEDICAL JOURNAL

abstract

Is Stereotactic Body Radiotherapy Safe and Effective in Lung Cancer Patients with Multiple Comorbidities?

Aveline Ylanan, Sheikh Nisar Ahmed, Fred Hsu, Marcus Sonier, Waseem Sharieff

DOI: 10.69690/ODMJ-018-3101-6947

AMSTRO
Asia and Middle East Society of Therapeutic Radiation and Oncology
Affiliated with ASTF

abstract

Is Stereotactic Body Radiotherapy Safe and Effective in Lung Cancer Patients with Multiple Comorbidities?

Author: Aveline Ylanan[1], Sheikh Nisar Ahmed[1], Fred Hsu[1], Marcus Sonier[1], Waseem Sharieff[1]

Affiliation: [1] BC Cancer Abbotsford, University of British Columbia, Canada

DOI: 10.69690/ODMJ-018-3101-647

Introduction: We examined the effectiveness and safety of stereotactic body radiotherapy (SBRT) in the treatment of lung tumors in Fraser Valley region of British Columbia, Canada.

Methodology: This is a retrospective chart review of lung tumors treated with SBRT from 2010 to 2020 at BC Cancer Abbotsford. We abstracted information on socio-demographic and disease characteristics, and treatment outcomes and toxicities (rib fractures, pneumonitis, and treatment related hospitalizations and deaths). Using descriptive statistics, Kaplan Meir and Cox regression models, we analyzed patient characteristics in relation to local control, survival and toxic events.

Results: From 2010 to 2020, a total of 150 lung tumors in 122 patients were treated with SBRT. Mean age was 75 ± 7 years, mean Charlson Comorbidity Index (CCI) was 6.6 ± 1.4 and mean tumor size was 2.23 ± 0.99 cm. Dosing regimen of 48 Gy/4 fractions was used in 112 (74%) patients. Median follow up was 25.6 months during which local control was observed in 136 (91%) tumors. At 5 years, progression free survival was 56% and overall survival was 27%. Tumor size and CCI were significantly associated with survival. Rib fracture was observed in four (3%) and pneumonitis in 18 (15%) patients.

Conclusion: In this cohort of lung cancer patients with advanced age and multiple comorbid conditions, SBRT was associated with high local control and low toxicity. The association of tumor size and CCI with survival underscores the importance of early cancer detection and treatment, and optimized management of comorbid conditions.

Conflict of interests: The authors declare no conflict of interests.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.