Stereotactic hypofractionated radiotherapy in stage I (T1-2 N0 M0) non-small-cell lung cancer (NSCLC).

Abstract:
Stereotactic Radiotherapy has the potential to produce high local control rates with low risk of severe lung toxicity. From December 2000 to January 2006, 68 inoperable patients (median age 76 years) with stage I NSCLC received definitive hSRT. A mean total dose of 37.5 Gy (24-40 Gy; 60%-isodose) in 3-5 fractions was applied. Immobilisation was carried out by means of a vacuum couch and low pressure foil (Medical Intelligence, Schwab München, Germany). Staging procedures were thoracic and abdominal CT-scan, FDG-PET and CT or MRI of the brain in all patients. Clinical target volume was the tumor as seen in lung windowing of CT and in FDG-PET. Organ movements (6-22 mm) and patient positioning in the couch (3-12 mm) were added as safety margin for the definition of the planning target volume (PTV), that was enclosed by the 60%-isodose. We observed four (6%) local tumor recurrences, resulting in an actuarial local tumor control rate of 96%, 88% and 88% after 1, 2 and 3 year follow-up. Nineteen patients died, with eight patients due to cancer (12%), two to local tumor progression alone. Cancer-specific survival is 96%, 82% and 73% at 1, 2 and 3 years. Eleven patients died from comorbidities, making a 53% overall 3-year survival. Fifty five percent of the patients were affected by mild acute and subacute side effects, with only 3% experiencing pneumonitis III degrees. Late effects were pneumonitis III
degrees in 1%, rib fractures in 3%, and benign pleural effusion in 2 patients. Hypofractionated SRT is safe even in elderly patients with stage I NSCLC and significantly reduced lung capacity. It leads to high local control rates and should be offered to patients not amenable for curative resection.

Zeitschriftenstitel / Abkürzung:
Acta Oncol

Jahr:
2006

Band:
45

Heft / Issue:
7

Seiten:
796-801

Sprache:
eng

Pubmed:

Print-ISSN:
0284-186X

TUM Einrichtung:
r RadioOnkologie und Strahlentherapie

Occurences:
· Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Klinik und Poliklinik für RadioOnkologie und Strahlentherapie > 2006

entries: