

Individual Strategy for Oligometastatic Lung Cancer (NSCLC): Case Study and Literature Review

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Abstract

For locally progressed NSCLC with distant metastases, currently only palliative systemic therapy is recommended as long as no health complaints or severe complications exist. In situations of good local control of primary tumor (PT) and only limited disease (oligometastases), open questions exist. Various methods treating PT and metastasis exist, such as surgery, radiofrequency ablation (RFA), transarterial embolization (TAE), selective internal radiotherapy (SIRT), and stereotactic radiosurgery (SRS). Often patients are only treated with chemotherapy.

Categories: Radiation Oncology, Oncology

Keywords: tumor, chemotherapy, oligometastases, Stereotactic Radiosurgery

Introduction

For locally progressed NSCLC with distant metastases, currently only palliative systemic therapy is recommended as long as no health complaints or severe complications exist. In situations of good local control of primary tumor (PT) and only limited disease (oligometastases) open questions exist [1]. Various methods treating PT and metastasis exist, such as surgery, radiofrequency ablation (RFA), transarterial embolization (TAE), selective internal radiotherapy (SIRT) and stereotactic radiosurgery (SRS) [2-4]. Often patients with oligometastatic disease are only treated with chemotherapy.

Case Presentation

Male patient (age: 66), diagnosis of NSCLC (squamous epithelial carcinoma, G3) was found by computer tomography/endoscopic exam and proven by histology. PT was located at the left central hilus. One solitary lung metastasis on the contralateral lung side was found.

Initial staging was cT4 cN2 M1a (pul). After six cycles of chemotherapy with Carboplatin and Vinorelbine given over four months, a no change situation persisted.

Early progress was detected in June of 2009; a second line chemotherapy with Paclitaxel mono was added. In February, 2010 progress was again observed. Because of impending compression of the left main bronchus, he was presented to us for radiotherapy.

We started treatment of PT and the ipsilateral mediastinal lymph nodes with simultaneous

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chemoradiotherapy, following SBRT of contralateral solitary lung metastasis. PET-CT proved metabolic activity only in PT area, ipsilateral lymph nodes and in solitary contralateral lung metastasis. Radiochemotherapy treated primary tumor and mediastinum of 50 Gy (2 Gy/fraction), followed by boost-irradiation of 20 Gy in PT-region in combination of chemotherapy with radio-sensitizing carboplatin. Only acute adverse effect was dysphagia (1°) with no weight loss. In July 2010, image-guided SRS (LINAC) with respiratory gating treatment of lung metastasis with 8x6 Gy without side-effects followed. After follow up of 24 months, patient still is in excellent general state of health (KPI 100%). Unchanged lung function parameters were measured. A two year CT follow-up showed complete remission.

Discussion

N/A

Conclusions

In his two year follow-up, our patient showed benefit from individualized, curatively designed proceeding. Apart from RT+SRS, collectives of surgically-treated patients with NSCLC and oligometastases showed survival benefit after resection of solitary lung metastases. Similar OAR, LC rates can be achieved by radiochemotherapy, plus SBRT of oligometastases.

Instead of treating only with chemotherapy for oligometastatic diseases local treatments seem to be favourable.

Additional Information

Disclosures

Human subjects: Consent was obtained by all participants in this study.

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