Approach to a Patient with Multiple Lung and Brain Carcinomas

Çoklu Akciğer ve Beyin Metastazları olan Hastaya Yaklaşım

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ABSTRACT

We report a case of lung cancer with multiple metastases to the brain. A 55-year-old man suffered onset severe cough and dyspnea. He had no history of any systemic disease. Standard blood work-up was normal. Computed tomographic and bronchoscopic biopsy identified an asymptomatic primary pulmonary large cell neuroendocrine carcinoma in the left upper lobe of the lungs and less differentiated squamous cell carcinoma right upper lobe of the lungs. He also received chemotherapy and radiation therapy to treat the primary lung cancer. Magnetic resonance imaging of the brain revealed multiple intracranial tumors, including 3 cm metastatic mass in left temporal lobe and 3.5 cm metastatic mass in right frontal lobe. There were no metastatic findings in any other organs. First of all, the patient underwent a right frontotemporal approach with total microsurgical resection and after time underwent a left temporal approach with total microsurgical resection. He made good recovery and discharged.

Key Words: Lung Carcinoma, brain metastasis, multiple

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CASE REPORT

We report a case of lung cancer with multiple metastases to the brain. A 55-year-old man suffered onset of severe cough and dyspnea. He had no history of any systemic disease. Using blood tests or biochemical tests of the patient was normal. In this case, patients with synchronous multiple metastasis to the brain alone who received chemotherapy, with concurrent radiotherapy to the brain and also to the thoracic lesions, resulting in mid-term survival, of more than 1 years. Chest computed tomographic findings revealed the anterior segment of the upper lobe of the left lung, 7x5.5 cm size irregular lobulated with contoured mass was limited. Right parahilar region show significant mass formation and elongation showing the right upper lobe apical segment of the solid is linear and nodular densities (Figure 1).
Bronchoscopic biopsy identified a large cell neuroendocrine carcinoma in the left upper lobe of the lungs and less differentiated squamous cell carcinoma right upper lobe of the lungs. He also received chemotherapy and radiation therapy to treat the primary lung cancer. Regarding lung carcinoma; chemotherapy, consisting of cisplatin (40mg/m2) and docetaxel (40mg/m2), was administered on days 1 and 8 with the drugs being given separately, and the chemotherapy was repeated every 4 weeks for up to three cycles.

The magnetic resonance imaging (MRI) revealed a 3x3.5 cm demarcated solitary-cystic metastatic mass in right frontal lobe (Figure 2). The patient first of all underwent a right frontotemporal approach with total microsurgical resection. Subsequently, radiotherapy was performed for the left brain lesion. Whole-brain irradiation (2 Gy/day; total, 36 Gy) and thoracic irradiation (2 Gy/day; total, 60 Gy) were started on days 1 and 29, respectively. One month after the radiotherapy there's no change at the metastatic lesion in the brain.

He had developed progressively herniation; general condition deteriorated and consciousness disturbance. MRI scans of the brain demonstrated a 2.5x3 cm well demarcated solitary-cystic metastatic mass in left temporal lobe (Figure 2). He underwent emergency surgery. Left temporal approach with total microsurgical resection was performed and Metastatic cancer was diagnosed. Histological examination of the tumor specimen taken from the central part of the tumor revealed metastasis. There were no metastatic findings in any other organs. He made a good recovery and discharged. Our patient has been successfully treated.

The patient recognizes a multidisciplinary approach (Departments of Medical Oncology, Neurosurgery, Radiation Oncology, Thoracic Surgery and Thoracic Diseases) outweighing the risks. As the patient does not expect a long life, the patient refuses surgery. If the surgeons, take into account medico-legal problems, the surgical treatment gets late.

Figure 1: Chest computed tomography imaging on admission showed the primary lesion in the left upper lobe.

Figure 2: T1-weighted and T2-weighted images in the transaxial-coronal plane showing solitary-cystic mass.
DISCUSSION

The patient described here, presented with an atypical clinical course-approach to patient’s and imaging findings for multiple metastatic brain tumor of multiple lung cancer. This is the first case in the literature, including different pathological cases with a diagnosis of lung cancer and multiple brain metastases.

A literature review suggested that lung carcinoma was the most frequent primary lesion. CT and/or MRI has detected such lesions; which would previously have been subclinical (5). The addition of radiotherapy to surgery did not have an impact on survival but decreased recurrence from 70% to 18% (8). In our case; after the radiotherapy, the brain lesion was not changed.

The chemotherapy, with concurrent radiotherapy should be given to those patients with brain metastases only in whom a significant survival benefit can be expected. Recurrent or new lesions in other organs have not been observed (6,7).

Due to improved tumor control in the brain and thorax as well as prevention or delay of the emergence of metastatic disease at sites other than the brain; a prolonged survival is expected as an outcome of this treatment. In addition to these; choosing the right treatment is vital(8).

CONCLUSION

We consider that preoperative evaluation and intensive talk about the condition of the patient is important to facilitate early operable brain metastases in patients. We have to take the initiative before we thought about the medico-legal problems. Therefore, many patients with brain metastases were cured or had a well-maintained quality of life for a longer period.

Conflict of interest
No conflict of interest was declared by the authors

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