TWO CASES OF COMPLETE REMISSION IN BRAIN METASTASIS FROM NSCLC AFTER PEMETREXED-BASED CHEMOTHERAPY

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About up to 40% of patients with non-small cell lung cancer (NSCLC) will develop brain metastases during the course of disease. The prognosis for such patients is relatively poor with limited survival. In addition to the whole brain radiation therapy (WBRT), some studies have shown that chemo-agent can improve the outcome of these patients. But some long-term survivors who received WBRT develop leukoencephalopathy. Here, we report two patients who achieved complete remission of brain metastasis with pemetrexed-based chemotherapy without any radiation therapy or EGFR-TKI exposure.

Case 1: A 49-year-old man was admitted to our hospital after the detection of a mass in his right lung in a routine physical examination. He did not have any disease-related symptoms. Chest CT revealed a mass of 2cm in size in the right upper lobe with ipsilateral hilar lymph node. Brain MRI showed two metastatic lesions in parietal and temporal lobe. Chemotherapy was initiated with cisplatin and pemetrexed combination. After 6 cycles of chemotherapy, brain metastases and primary lung lesion disappeared. He has been in CR state for more than 3 years.

Case 2: A 68-year-old man was referred from primary clinic to our hospital with a suspicion of pneumonia. Chest CT showed a tumor in the right upper lobe and swollen mediastinal lymph node with a bronchial obstruction. Chemotherapy was initiated with cisplatin and pemetrexed combination. After 6 cycles of chemotherapy, complete response and 18 month progression free survival were obtained in brain metastasis until last follow-up of brain MRI. The patient subsequently received maintenance therapy with pemetrexed for 14 cycles until disease progression. Maximal effect in the primary lesion was partial response.

Conclusion: Chemotherapy alone, with a new agent such as pemetrexed, would be a promising option for the initial treatment in NSCLC patients with asymptomatic brain metastasis.