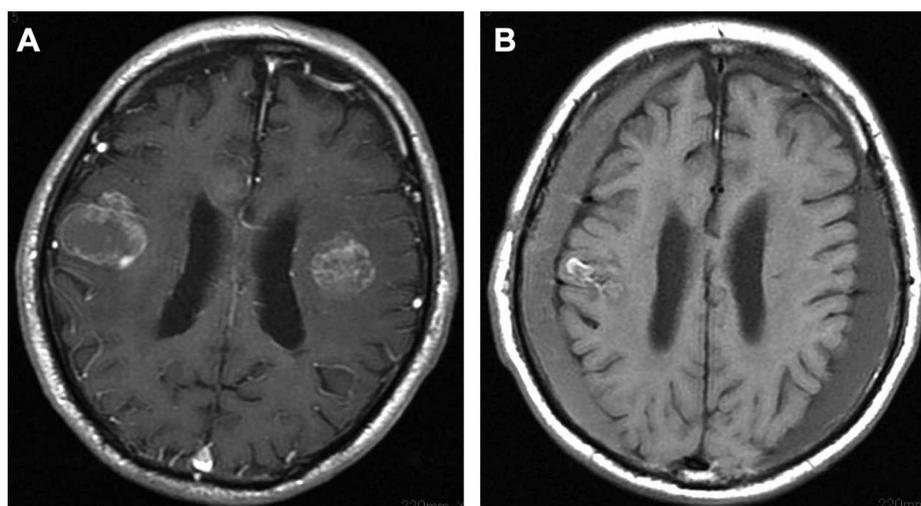


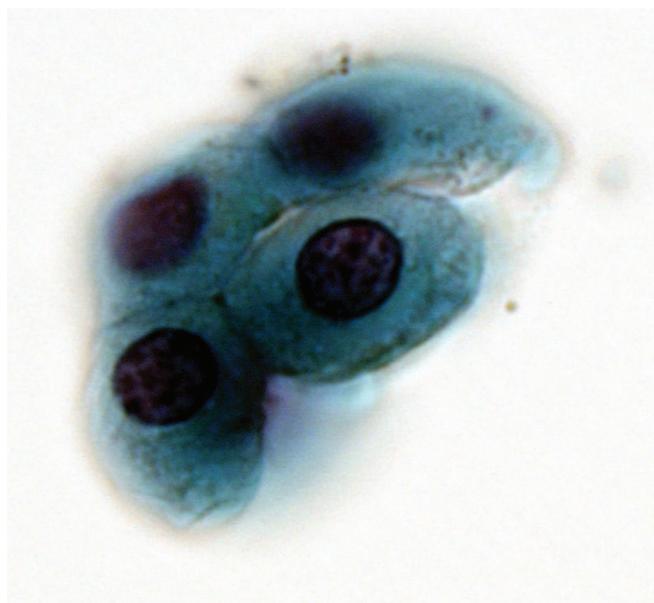
## Bilateral Subdural Hematoma Associated with Central Nervous System Metastases from Lung Cancer

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**FIGURE 1.** A, Brain magnetic resonance image taken on admission shows bilateral masses in the brain. B, Brain magnetic resonance image taken on deterioration of symptoms shows bilateral crescent-shaped isointensity lesions (arrowheads) and a shrunken brain mass (arrow).

A 74-year-old man was referred to our hospital because of a gait disturbance. Positron emission tomography and computed tomography scans revealed a tumor in his left lower lobe, but no other lesions were found. Multiple brain tumors compatible with metastatic tumors were found with magnetic resonance imaging of the brain (Figure 1A). A histologic examination via transbronchial biopsy revealed adenocarcinoma, and the patient was diagnosed with metastatic non-small cell lung cancer. Epidermal growth factor receptor gene mutational analysis revealed that the cancer was of the wild type. After whole-brain radiotherapy, six cycles of chemotherapy consisting of cisplatin and gemcitabine were administered. The primary lung tumor remained as



**FIGURE 2.** Adenocarcinoma cells detected in hematoma fluid.

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a stable disease. However, metastatic brain tumors responded to whole-brain radiotherapy and sequential chemotherapy. Two months after six cycles of chemotherapy, he complained of deterioration in his gait disturbance. Brain magnetic resonance imaging showed bilateral subdural hematoma with a cerebral tumor (Figure 1B). We considered a possible traumatic onset and therefore asked a neurosurgeon to drain the hematoma. After neurosurgeons drained only the right side, fluid cytology revealed adenocarcinoma cells (Figure 2). We concluded that the subdural hematoma was associated with central nervous system (CNS) metastases (brain and leptomeningeal metastases) from lung cancer. His symptoms did not improve despite the drainage. Although erlotinib and pemetrexed were administered successively, both were ineffective. As his performance status gradually worsened, best supportive care was chosen. He has since survived 2 months after best supportive care was chosen.

Bilateral subdural hematoma associated with neoplastic invasion to CNS is a rare complication, particularly in cases of lung cancer.<sup>1-3</sup> We assume that disseminated cancer cells from brain tumors invaded the dura and promoted vascular permeability, resulting in leptomeningeal metastases and the formation of hematoma. We should be aware of the possibility of nontraumatic subdural hematoma caused by CNS metastases from lung cancer.

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