Cerebral Air Embolism Associated with Lung Cancer

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An 85-year-old man with advanced non-small-cell lung cancer was hospitalized because of seizures. Brain computed tomography (CT) scan showed air densities in the branches of left middle cerebral artery (Picture 1A), and diffusion-weighted magnetic resonance imaging revealed multiple high-intensity signals in the both cerebral hemispheres (Picture 1B). Chest contrast-enhanced CT scan indicated a necrotic tumor with cavities in the right lung (Picture 1C). The patient was diagnosed as cerebral air embolism associated with advanced lung cancer, because no other embolic source could be found. It was speculated that air flowed into the pulmonary vessels, which had necrotic tumor with cavities, when intrathoracic pressure was elevated by cough, straining, or stooping. It has been previously reported that cerebral air embolism can be complicated by invasive procedures such as needle biopsy (1). However, the present patient had no invasive treatments, suggesting that cerebral air embolism is a rare but noteworthy complication of advanced lung cancer with necrotic cavities.

The authors state that they have no Conflict of Interest (COI).

Reference