



Fatal case of Cerebral Arterial Gas Embolism one decade after left chest stab wound



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Introduction: We report a fatal case of cerebral arterial gas embolism (CAGE) to highlight its diagnostic and treatment challenges.

Methods: A decade prior to current hospitalization for status epilepticus, this 41 year old male was stabbed in the left chest, underwent left ventricle repair along with ligation of the left anterior descending artery, following which he developed poor left ventricular function. Three years later he experienced hemoptysis; a false aneurysm of the left ventricle communicating with the pulmonary parenchyma was discovered and repaired. Five years ago, a left ventricle true aneurysm communicating with the lung tissue was found and repaired. Bronchoscopy 8 months ago for hemoptysis revealed lingular bronchiectasis; bronchial artery was embolized but the hemoptysis persisted. One week ago, the patient experienced first seizure that lasted 15 minutes.

Five days and multiple seizures later, he visited the emergency room of a local hospital where his head CT being normal he was discharged home on anti-epileptics. The next day he was hospitalized and suffered from six seizures, necessitating sedation and mechanical ventilation.

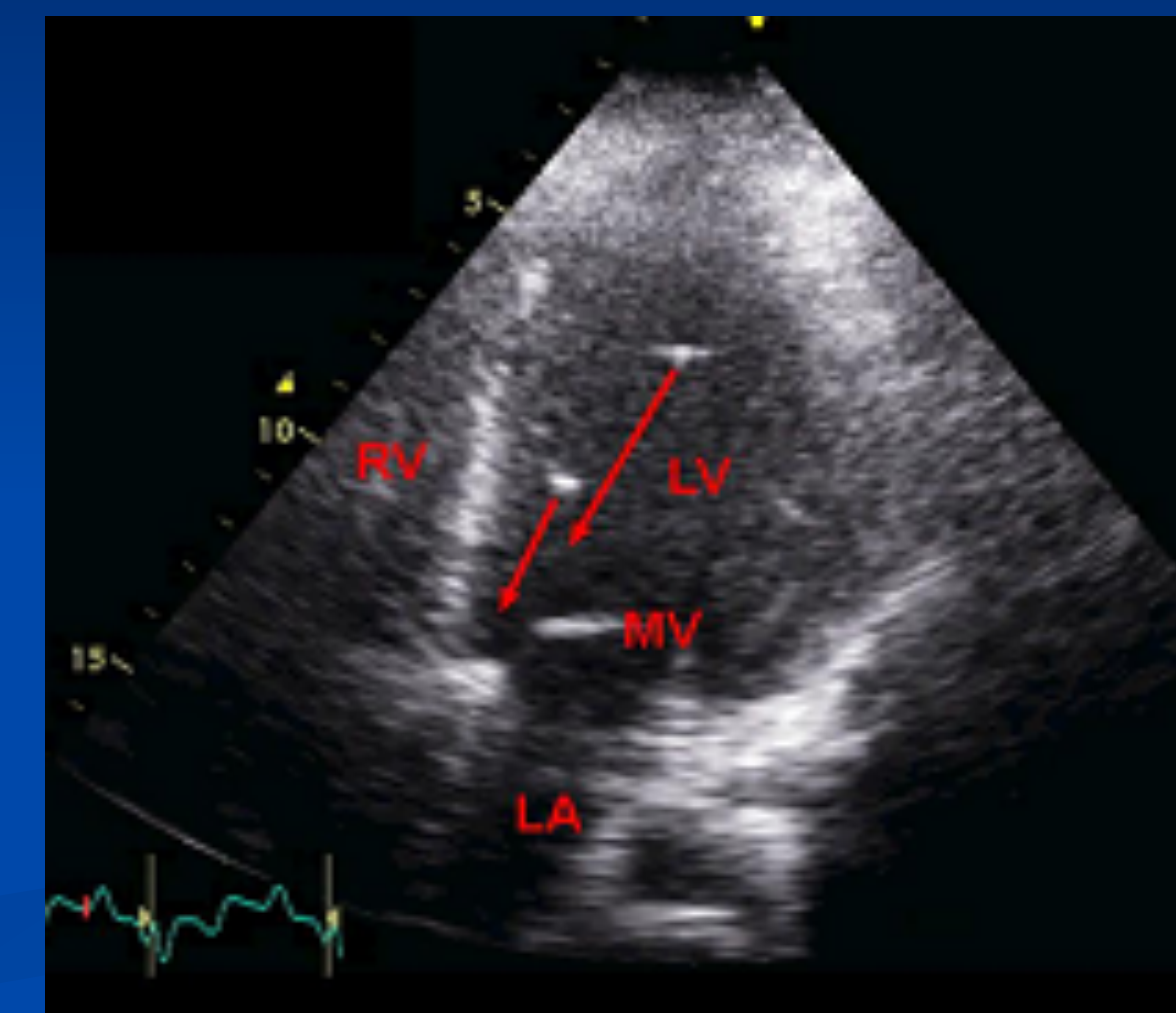
Results: A head CT showed large pneumocephalus, effacement of sulci, and air in temporal vessels bilaterally. A chest CT showed left ventricle-lung fistula. Nine hours later the patient was transferred to us for HBOT, which was initiated, however, the patient rapidly deteriorated. A repeat head CT following HBOT showed significant increase in his pneumocephalus and an echocardiogram uncovered air bubbles confined to the left ventricle and exiting through the aorta.

Summary: Our patient developed fatal cerebral arterial gas embolism from a left ventricle-pulmonary fistula, the repair of which, in retrospect, should have taken precedence over the HBOT

Head CT Scan



Apical 4 Chamber View



Head CT Scan



Parasternal Long Axis

