

**Title: Pyopneumothorax, sepsis, and acute heart failure in a patient with infective endocarditis: A case report**

**Author(s): Abdul R Al Armashi MD, Francisco J. Somoza-Cano MD**

**Affiliation:** St. Vincent Charity Medical Center

"A 31-year-old female with a past medical history of polysubstance abuse presented with one-week history of altered mental status and sudden-onset dyspnea. Physical examination revealed tachycardia, hypotension, diminished breath sounds on the right pulmonary base, and a holosystolic murmur at the left lower sternal border. Chest x-ray showed right-sided pneumothorax. Chest CT scan revealed numerous cavitating septic emboli in both lungs with a left-sided pleural effusion. She was admitted to the Intensive Care Unit as a septic shock where fluids and antibiotics were given, and a chest tube was placed on the right hemithorax, draining purulent material. Transthoracic echocardiogram (TTE) found a 2.5 cm mobile vegetation on the tricuspid valve and an ejection fraction of 50%. 24 hours later, she progressively decompensated, prompting intubation and vasopressors. Repeat TTE noted ejection fraction decreased to 20-25%. Assessment by cardiothoracic surgery for emergent valve repair was made, but due to the immediate high morbidity and mortality risk, the procedure was deferred. The patient was transferred to a long-term acute care facility for pathogen-directed intravenous antibiotics. She expired thereafter as a consequence of two consecutive cardiac arrests.

This case illustrates rare potential life-ending complications such as pyopneumothorax and multiple cavitary infiltrates of a late-presenting infective endocarditis. Prompt evaluation by a cardiothoracic surgeon might be life-saving.

"