

24th Annual Resident Poster Day

October 12, 2021



Multifactorial Pneumopericardium

Mohamed Salah Mohamed, MD; Saarwaani Vallabhajosyula, MD; Gabriel O. Vachon, DO

Pneumopericardium is defined as presence of air in the pericardium. It can occur with or without pneumomediastinum. Etiologies include Blunt trauma to chest, fistula with bronchus or GI tract, complication of pericarditis, or spontaneous. Risk factors include Cocaine smoking and asthma. The infrequency of pneumopericardium makes its diagnosis and management challenging. This patient's pneumopericardium was in the setting of multiple risk factories including her asthma, cocaine smoking, and pericarditis. Cocaine smoking with deep breaths with holding at inspiration is a major contributor to her pneumopericardium. Cocaine can cause damage to alveoli resulting in air leak to pericardium and mediastinum. The two main factors that determine the management plan in pneumopericardium are patient's symptoms and hemodynamic stability. If the patient has minimal symptoms and is hemodynamically stable, then conservative management is preferred allowing for gradual reduction of pericardial air over time. However, failure of conservative management (persistence of symptoms) or hemodynamic instability (in which cardiac imaging will show signs of cardiac tamponade).