

SPONTANEOUS PNEUMOPERICARDIUM IN A PATIENT WITH METASTATIC BREAST CANCER

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Case Vignette

Spontaneous pneumopericardium, a collection of air or gas in the pericardial cavity, is an extremely rare complication described in only a few case reports. A 39-year-old woman with a history of triple negative breast cancer with known metastasis to her brain, liver, bones and lungs presented with hypoxia and hypotension. Her vitals were BP 81/62, HR 99, RR 28, and O₂ saturation of 86%. Exam revealed distant heart sounds, absent right sided breath sounds, and cool extremities without peripheral edema. Computed tomography of the chest demonstrated pneumopericardium (see figure 1) and lung consolidation with volume loss of entire right lung with a large loculated pleural effusion. EKG showed sinus rhythm, low voltage, and non-specific ST segment changes. She was given intravenous fluids (IVF) with improvement of her hypotension and placed on non-rebreather with improvement of her oxygenation. Needle decompression of her pericardium was considered but not performed given the absence of tamponade and improvement of her hemodynamics after IVF. Transthoracic echocardiogram revealed a moderate pericardial effusion with air bubbles but no evidence of tamponade. Approximately 8 hours after presentation, the patient's hypoxia worsened despite maximum high-flow nasal cannula and non-rebreather mask. Bilevel positive airway pressure was deemed contraindicated given the pneumopericardium. In addition, the patient had a do not resuscitate or intubate order in place. The patient expired soon after. Spontaneous pneumopericardium has usually been described in the context of metastatic malignancies of the thorax. Pneumopericardium, unlike pneumothorax is often self-limiting not requiring any specific treatment. Treatment of small pneumopericardium is usually directed towards the underlying disease. In larger pneumopericardium or in patients with tension pneumopericardium, needle aspiration or tube decompression may be needed.



Figure 1. CTA chest revealing pneumopericardium. White arrow indicating pericardium.