

# Rapid Fire: Pericardial Effusion and Tamponade

Akilesh P. Honasoge, MD<sup>a,b</sup>, Sarah B. Dubbs, MD<sup>a,\*</sup>

## KEYWORDS

- Pericardial effusion • Cardiac tamponade • Cancer • Oncologic emergency
- Pericardiocentesis • Electrical alternans

## KEY POINTS

- Suspect tamponade in patients with cancer presenting with tachycardia, shortness of breath, and hypotension.
- Look for low voltage and electrical alternans on electrocardiogram.
- Perform bedside echocardiogram early to diagnose pericardial effusion and/or tamponade.
- Use ultrasound guidance if possible during pericardiocentesis.
- Avoid intubation in patients with pericardial effusion or tamponade.

## CASE: SHORTNESS OF BREATH, TACHYCARDIA, AND CANCER

*Pertinent history:* A 41-year-old man with recently diagnosed stage IV lung adenocarcinoma presents to the emergency department with shortness of breath. The patient was diagnosed 3 weeks prior with stage IV adenocarcinoma causing a complete occlusion of his right mainstem bronchus and a large malignant pleural effusion, which was treated with chest tube drainage. He reports he had been doing well after discharge but started having progressively worsening shortness of breath and dyspnea on exertion 24 hours later. He denies any fevers or chills. He reports mild chest pain only present with deep inspiration and coughing.

*Past Medical History:* stage IV lung adenocarcinoma after 2 rounds of thoracic radiation; plan to start systemic chemotherapy the following week.

*Medications:* none.

---

Disclosure Statement: The authors have no relationship with a commercial company that has a direct financial interest in the subject matter or materials discussed in the article or with a company making a competing product.

<sup>a</sup> Department of Emergency Medicine, University of Maryland Medical Center, 110 South Paca Street, 6th Floor, Suite 200, Baltimore, MD 21201, USA; <sup>b</sup> Department of Internal Medicine, University of Maryland School of Medicine, 110 South Paca Street, 6th Floor, Suite 200, Baltimore, MD 21201, USA

\* Corresponding author.

E-mail address: [sdubbs@som.umaryland.edu](mailto:sdubbs@som.umaryland.edu)

Emerg Med Clin N Am ■ (2018) ■-■  
<https://doi.org/10.1016/j.emc.2018.04.004>

0733-8627/18/© 2018 Elsevier Inc. All rights reserved.

[emed.theclinics.com](http://emed.theclinics.com)

*Physical examination:* Temperature: 37.1; blood pressure (BP): 155/105; heart rate: 128; Respiratory Rate = 28; oxygen saturation as measured by pulse oximetry: 82% on room air, 100% on Non-Rebreather

*General:* Alert, ill appearing in moderate respiratory distress, oriented  $\times 3$

*Head/Eyes/Ears/Nose/Throat (HEENT):* Pupils equal, round, and reactive to light, mucous membranes dry, no stridor

*Neck:* full range of motion (ROM), no significant Jugular venous distension but examination limited because of accessory muscle usage

*Cardiovascular:* regular rhythm, tachycardic, no murmurs/rubs/gallops, sinus tachycardia on the monitor

*Pulmonary:* significantly decreased lung sounds over right chest, coarse rhonchi throughout

*Abdominal:* soft, nontender, nondistended, normal bowel sounds

*Neurologic:* 5/5 strength and normal sensation throughout

*Musculoskeletal:* normal pulses throughout, full ROM of all extremities, no significant peripheral edema

Diagnostic testing	
WBC	10.3 K/mcL
Hgb	9.7 g/dL
Hct	29.4%
Plt	311 K/mcL
Na	135 mmol/L
Potassium	3.8 mmol/L
Cl	101 mmol/L
CO <sub>2</sub>	23 mmol/L
Glucose	161 mg/dL
BUN	10 mg/dL
Creatinine	0.62 mg/dL
Calcium	9.3 mg/dL
Troponin	<0.02 ng/mL
Prottime	18.1 s
INR	1.5
PTT	29 s

*Abbreviations:* BUN, serum urea nitrogen; Cl, chloride; CO<sub>2</sub>, carbon dioxide; Hct, hematocrit; Hgb, hemoglobin; INR, international normalized ratio; Na, sodium; Plt, platelets; Prottime, prothrombin time; PTT, partial thromboplastin time; WBC, white blood cell.

*Electrocardiogram (EKG):* As seen in [Fig. 1](#), the EKG revealed sinus tachycardia and alternating QRS amplitude from beat to beat, also known as electrical alternans.

*Portable chest radiography:* A large right pleural effusion and enlarged cardiac silhouette was seen on portable anteroposterior chest film, as seen in [Fig. 2](#).

*Clinical course:* A diagnostic workup was quickly initiated with the laboratory tests, EKG, and radiograph, as mentioned earlier and in [Figs. 1](#) and [2](#). A bedside ultrasound was performed that showed a large pericardial effusion with a swinging motion of the

Download English Version:

<https://daneshyari.com/en/article/8718372>

Download Persian Version:

<https://daneshyari.com/article/8718372>

[Daneshyari.com](https://daneshyari.com)