

Yale SCHOOL OF MEDICINE

Radiology elective case presentation

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YSM class of 2020

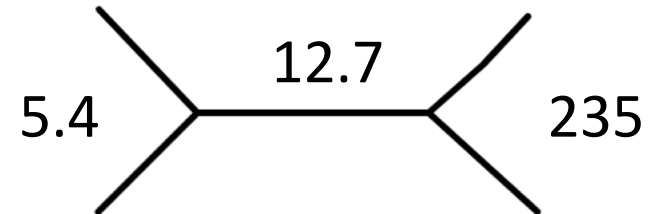
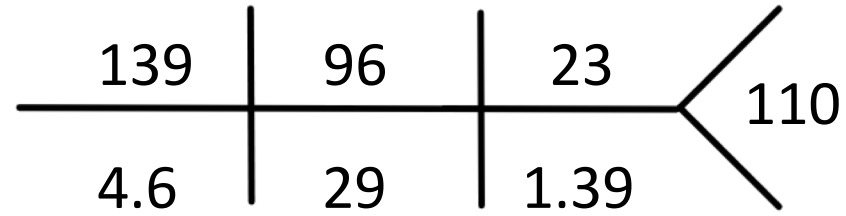
9/4/19

Case presentation

- 65yo man with history of mitral valve replacement 8/2, HTN, HLD, PVD, CAD s/p PCI w/ stents 2009
- Presented to YNHH ED on 8/22 with 3 weeks of substernal chest pain and intermittent dyspnea.
- Acute worsening of chest pain overnight (woke him from sleep) and of dyspnea after ED arrival (unable to speak in full sentences without struggling to breathe).

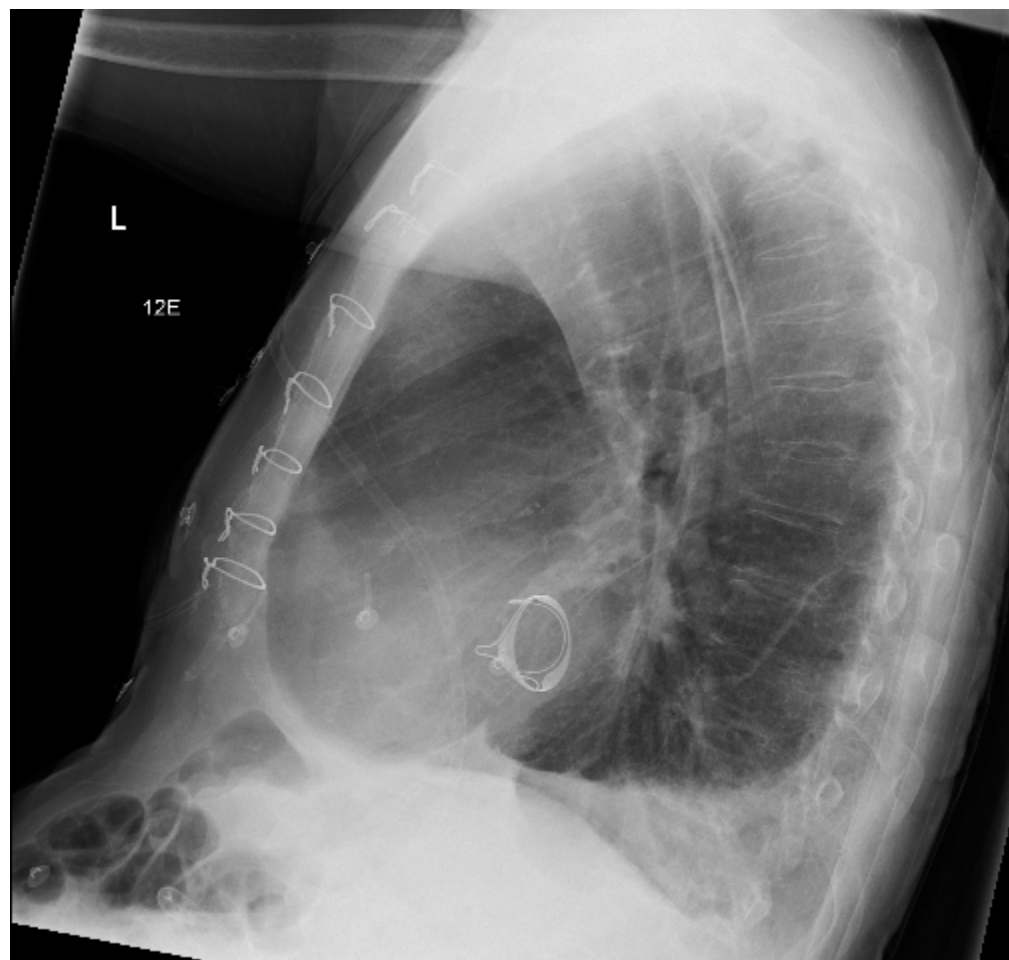
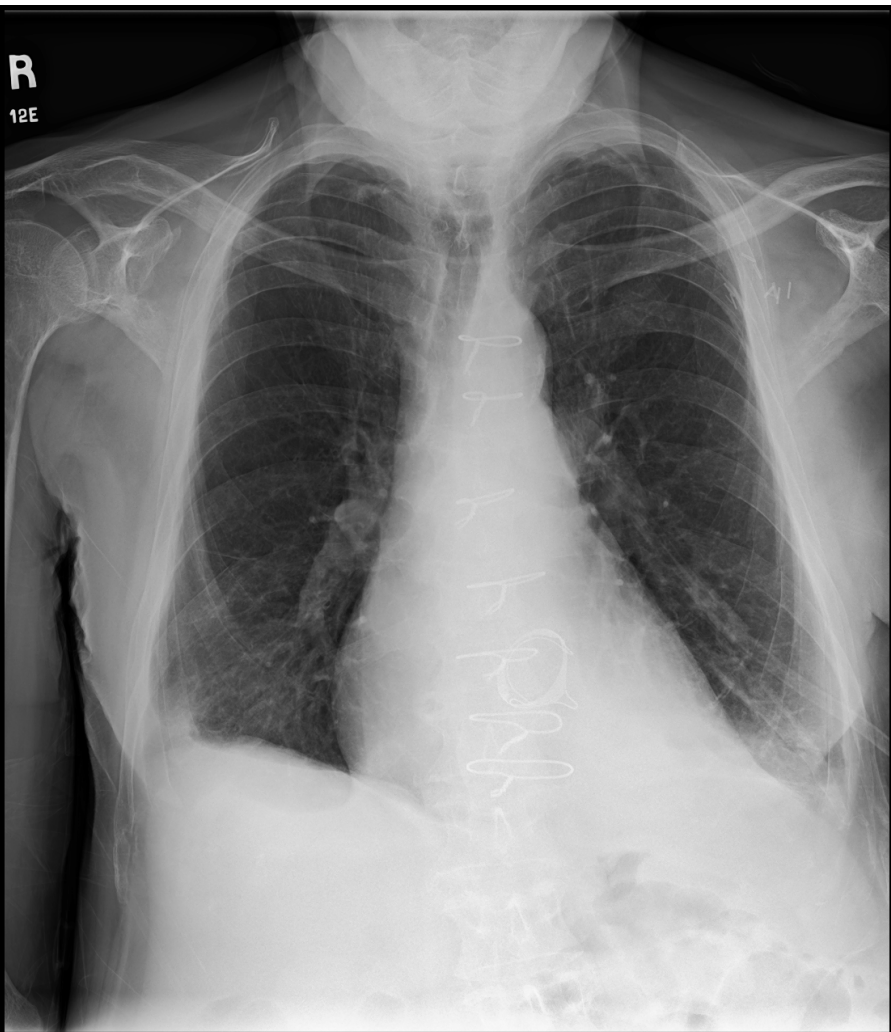
Initial vitals

BP 123/81 Afeb SpO2 96%
HR 67 RR 17

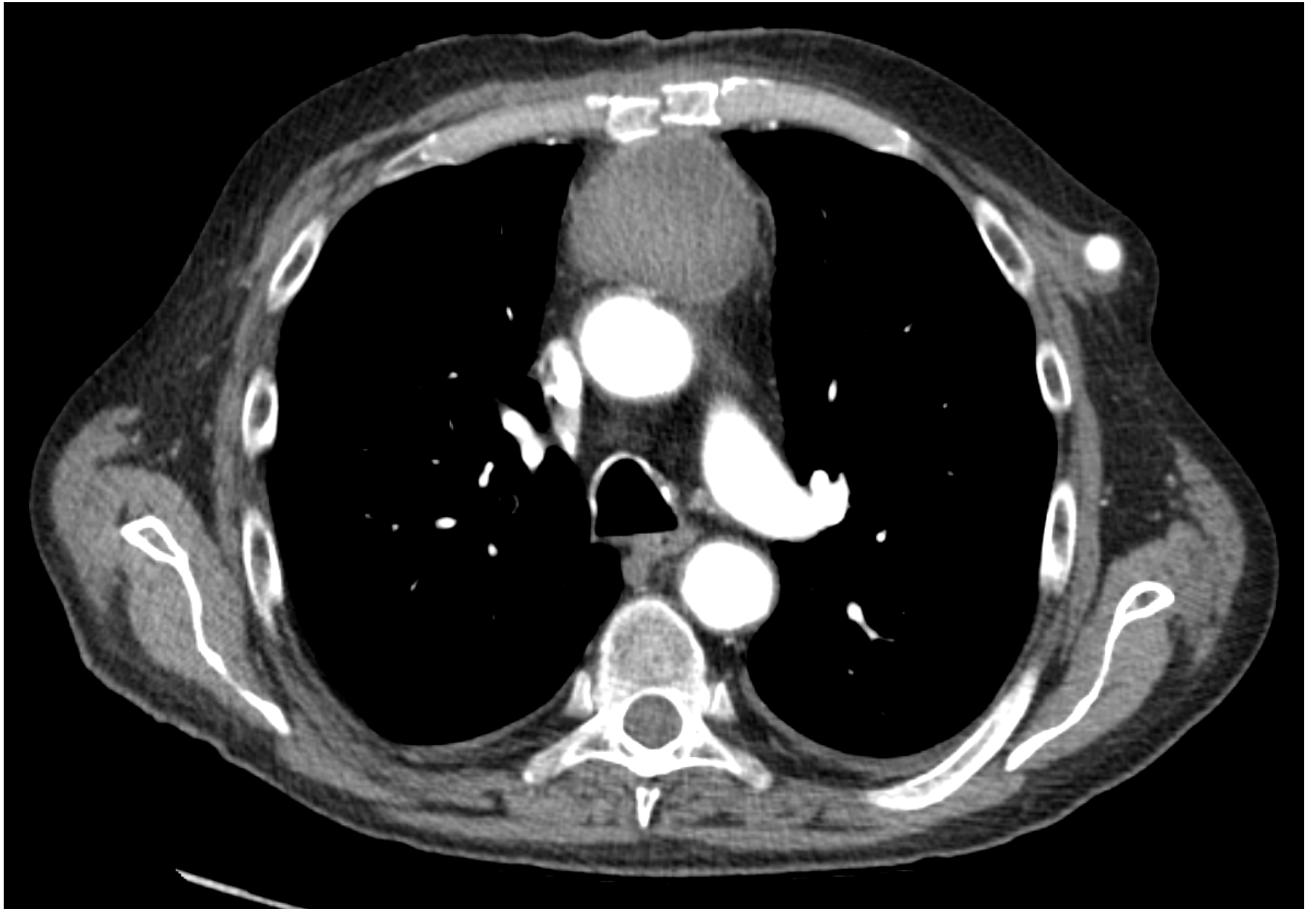


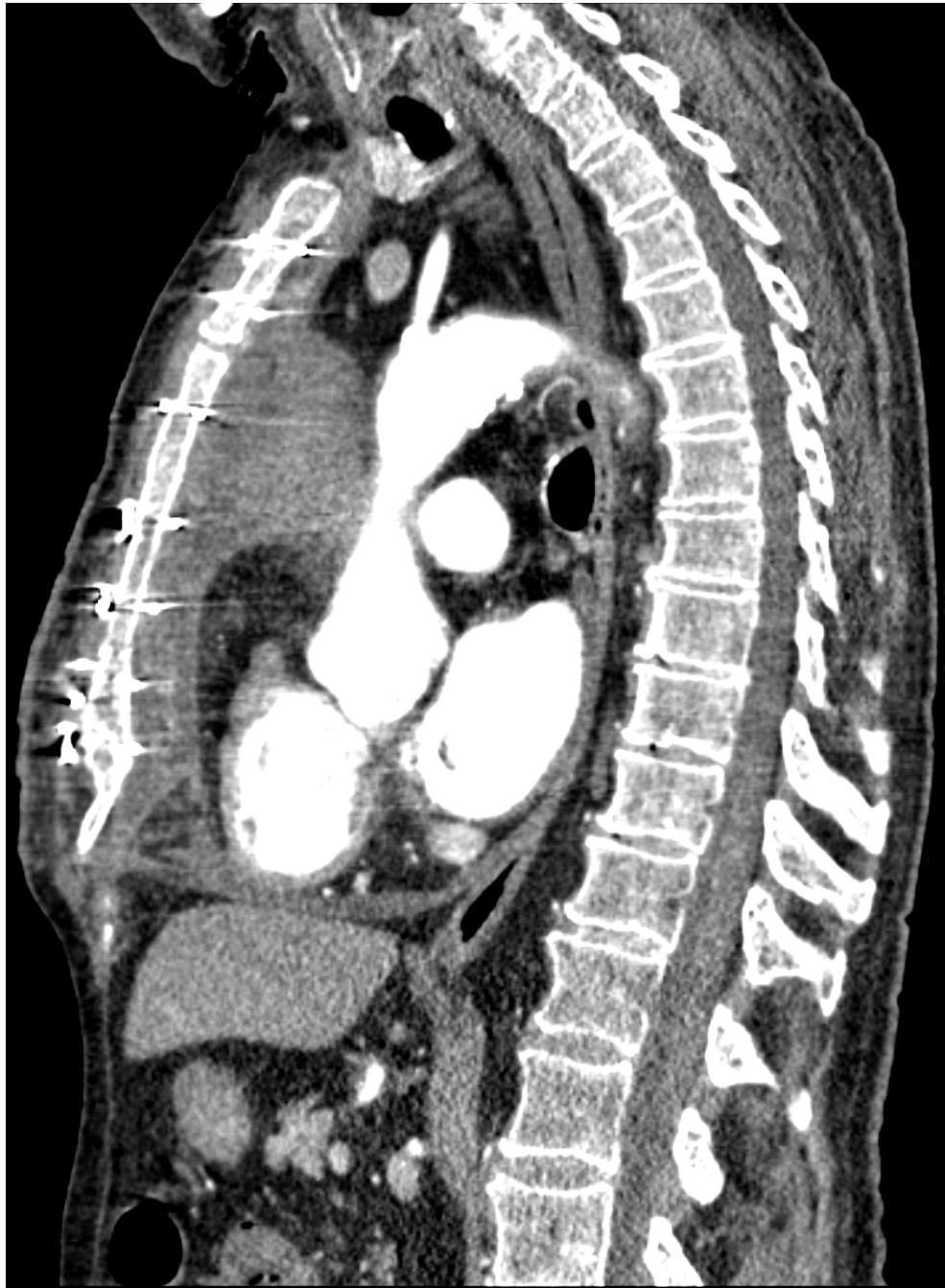
Trop I: 0.02
proBNP: 1179 (nl <300)
INR: 2.15
ECG: wnl

CXR 8/22



CT 8/22





Case resolution

- Given vancomycin in ED, SpO₂ dropped to 80%, vancomycin was stopped and IV bolus given with good effect.
- 8/22: had IR US- and CT-guided drainage of retrosternal fluid collection. Aspirated 10+ mL bloody-appearing fluid.
- Fluid cultures grew G+ cocci in clusters in 1/2 bottles.
- Remained afebrile and hemodynamically stable. Discharged home 8/23 on doxycycline.

CXR 8/23



Postoperative mediastinal infections

- Incidence of ~0.8% after sternotomy, median time to infection ~20 days¹
- Mortality estimates range from 14% to 47%²
- Risk factors include PVD, smoking, high NYHA score, surgery involving bilateral internal mammary artery use, and prolonged use of ventilator post-op³
- CT findings in postoperative pts with acute mediastinitis⁴

Retrosternal fluid collection: 46%	Pleural effusion: 68%
Pericardial effusion: 35.7%	Sternal dehiscence: 57%

Sources:

- 1) Perrault, Louis P., et al. "A prospective multi-institutional cohort study of mediastinal infections after cardiac operations." *The Annals of thoracic surgery* 105.2 (2018): 461-468.
- 2) El Oakley, Reida M., and John E. Wright. "Postoperative mediastinitis: classification and management." *The Annals of thoracic surgery* 61.3 (1996): 1030-1036.
- 3) Ridderstolpe, Lisa, et al. "Superficial and deep sternal wound complications: incidence, risk factors and mortality." *European journal of cardio-thoracic surgery* 20.6 (2001): 1168-1175.
- 4) Exarhos, D. N., et al. "Acute mediastinitis: spectrum of computed tomography findings." *European radiology* 15.8 (2005): 1569-1574.