Yale NewHaven Health Bridgeport Hospital

A RARE CASE OF PNEUMOPYOPERICARDIUM

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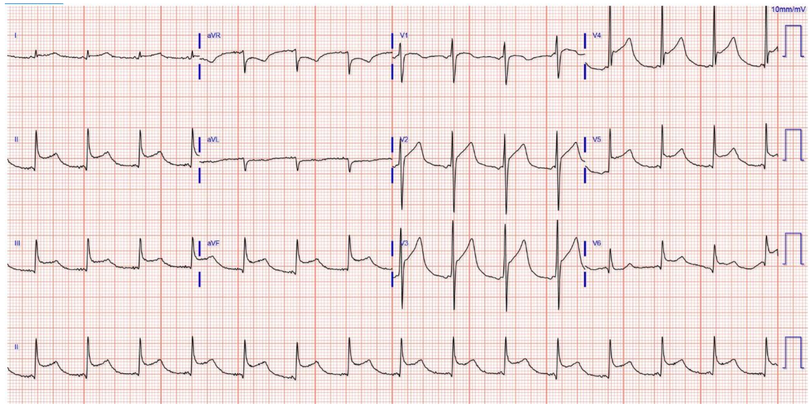
INTRODUCTION

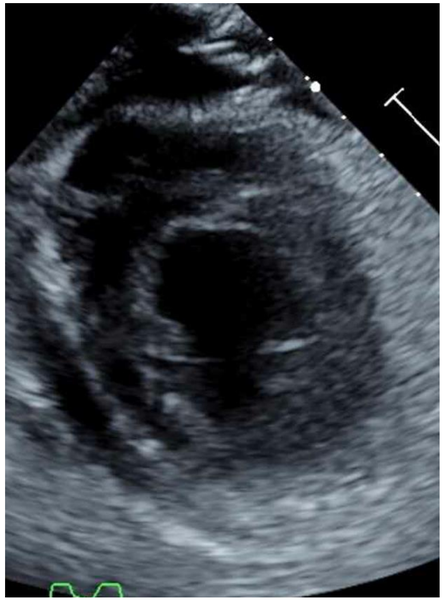
- Pneumopyopericardium is a rare entity with poor prognosis, first described by Dr. Hallin in 1863.
- Most common precipitating cause is a non traumatic esophageal ulcer or carcinoma.
- Here, we present a case of pneumopyopericardium with cultures growing gram-positive cocci and gram-negative rods.

CASE HISTORY

- 48-year-old male with past medical history of esophageal cancer status post radiation chemotherapy, Barrett's esophagus with an underlying ulcer on endoscopy and intravenous drug use presenting with chest pain and dyspnea.
- On initial exam, he was afebrile, blood pressure of 106/73 mmHg, pulses of 83 beats/min and respiratory rate of 20/min.
- Physical exam was unremarkable.
- Electrocardiogram (EKG) showed diffuse ST elevations concerning for pericarditis and negative troponins.
- Initial blood tests significant for leukocytosis and elevated creatinine.
- For evolving dynamic changes in his EKG, he underwent an emergent cardiac catheterization which revealed non-obstructive coronary arteries.
- Bedside echocardiogram revealed normal left ventricular ejection fraction with no new regional wall motion abnormalities, septal bounce consistent with constrictive pericarditis and a trivial pericardial effusion located anteriorly.
- He was started on vancomycin, piperacillin/tazobactam, colchicine.
- Cardiac MRI with contrast showed moderate pericardial effusion with possible air artifacts, late gadolinium enhancement of the pericardium and a heterogenous collection anterior of right ventricular wall concerning for a mass and bilateral pleural effusions.
- Later he developed shock requiring intubation and pressors with echo showing tamponade physiology. An emergent CT chest revealed moderate pericardial effusion with multiple air pockets within.
- He underwent pericardiocentesis emergently and 200 cc of yellow purulent fluid was removed along with some air, with subsequent insertion of pigtail catheter.
- Pericardial fluid showed total nucleated cells of 1,39,220 cells/uL with 97% neutrophils and 3% lymphocytes.
- Gram stain showed gram positive cocci and gram negative rods.



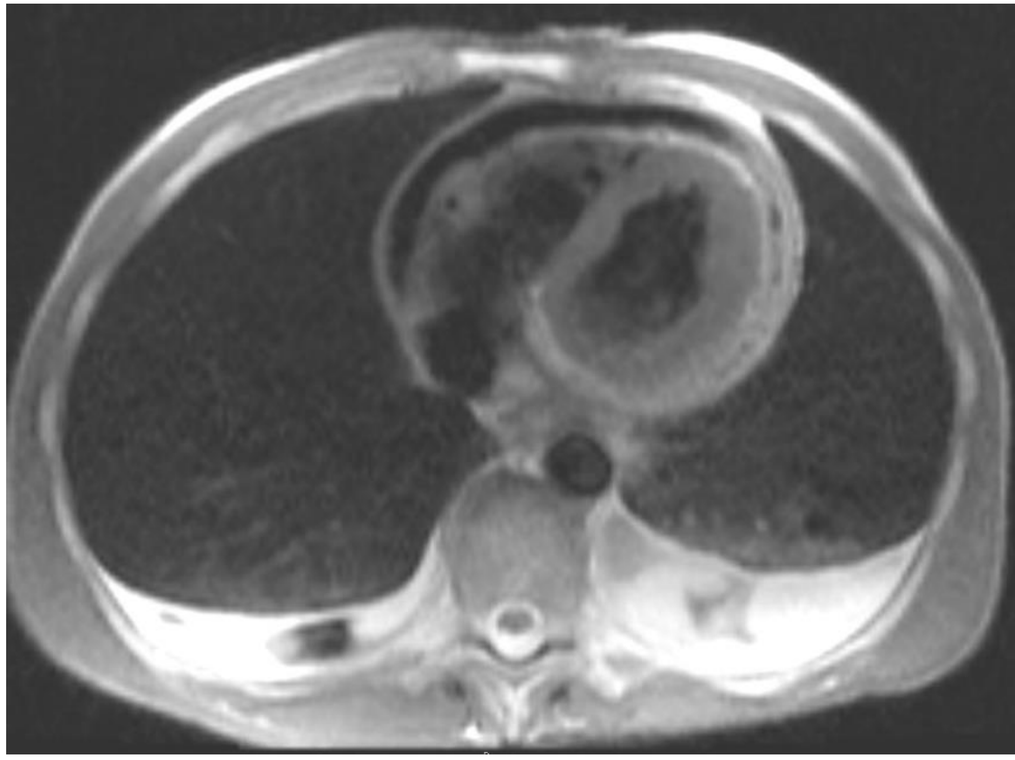
EKG showing diffuse ST elevations which were consistent with our findings of pericarditis



Initial echocardiogram short axis view showing anterior loculated pericardial effusion with no evidence of tamponade physiology on subsequent series

DISCUSSION AND CONCLUSION

- Pneumopyopericardium is an unusual presentation with less than 20 cases worldwide.
- Our patient most likely had this pneumopyopericardium from micro perforation in the esophageal cancer which has been documented in literature via case reports.
- Our patient developed mixed shock thereafter and had worsening clinical course leading to death.
- High degree of suspicion should be maintained for pyopericardium in patients coming with pericarditis and history of esophageal ulcer or carcinoma with early initiation of antibiotics and intervention to remove the purulent fluid keeping in mind that majority outcomes despite maximal medical therapy are fatal.



Cardiac MRI showing circumferential pericardial effusion with pericardial late gadolinium enhancement suggesting inflammation. Thickening of anterior right ventricle free wall.

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