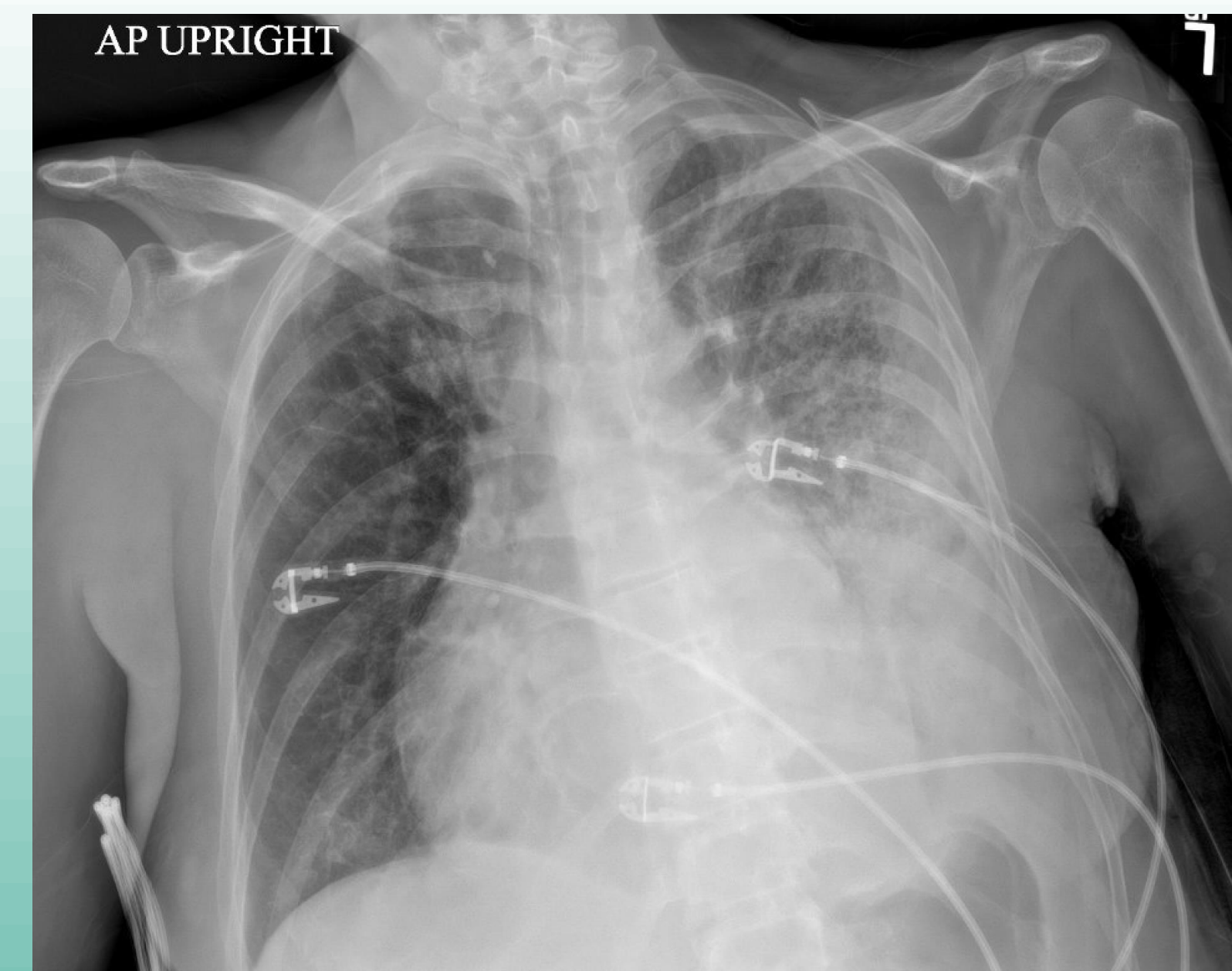


Introduction

Purulent pericarditis is a rare presentation of infection found and localized to the pericardial space. A retrospective review of a hospitalized patient population of 593,600 found only 33 cases observed, and of those 33 cases, 14 were postmortem. When observed, the pathogenesis of purulent pericarditis is mostly from direct spread from an intrathoracic infection, hematogenous spread or extension from subdiaphragmatic abscess. In cases of purulent pericarditis, the incidence of cardiac tamponade ranges from 42 to 77%. Most common organism causing purulent pericarditis is *Staphylococcus aureus*, however in patients with intrathoracic infections, *Streptococcus pneumoniae* is the most frequently isolated.

Clinical Imaging

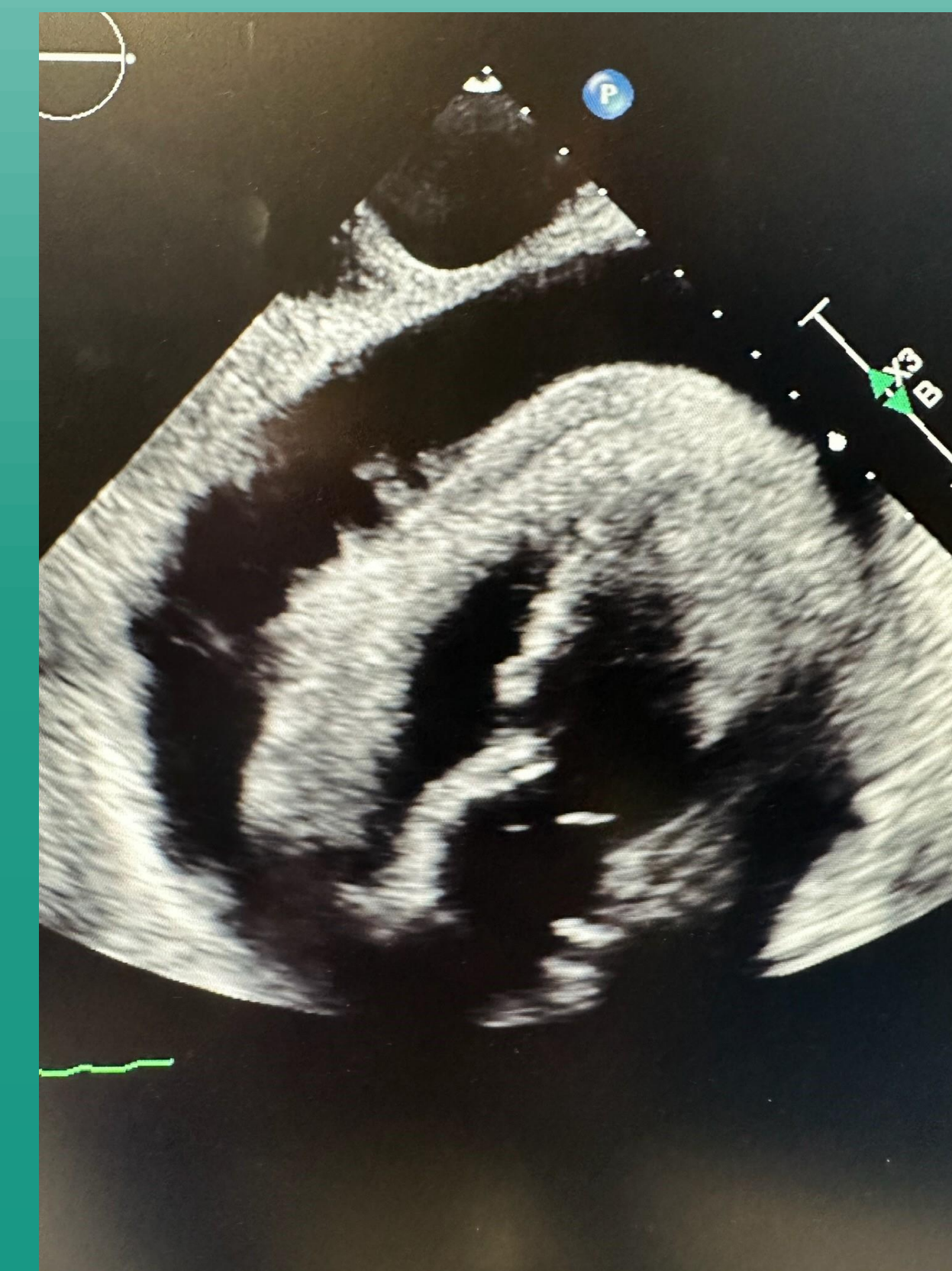


Hospital Course Following Downgrade

Following the procedure, her pressor requirements drastically dropped. She was treated with empiric Vancomycin and ceftriaxone and pericardial fluid showed large number of WBCs. No organisms were isolated in the culture, likely sterile due to previous administration of antibiotics, however the likely pathogen was *S. Pneumoniae* which had been seen in pleural studies. She was downgraded several days later from the ICU, continued a prolonged course of ceftriaxone, and was eventually discharged from the hospital.

Case Presentation

Patient is a 51-year-old female with past medical history of Crohn's disease who presented with chief complaint of shortness of breath and fevers. She had a recent Covid infection and due to progression of her symptom's family called EMS, who started the patient on Dopamine and proceeded with admission to the ICU.



Conclusion

The presentation of purulent pericarditis following empyema is exceedingly rare and more so complicated by cardiac tamponade. In this case, pleuritic fluid isolate cultured *Streptococcus pneumoniae*. Despite initial improvement, the patient experienced clinical deterioration and underwent bedside pericardiocentesis, leading to reduced pressor requirements and ultimately clinical stabilization and discharge home. This case emphasizes the importance of timely interventions and individualized care to address complex conditions and achieve improved patient outcomes.

Hospital Course in ICU

In ED she was found to have a large left sided empyema and thoracostomy was performed with tan exudative material draining. She was mildly hypotensive, treated with a sepsis bolus of 30 ml/kg of NS and admitted to the ICU for sepsis. She was empirically treated with cefepime with incremental improvement and did not require any pressors during her ICU stay. A CT chest was obtained which showed left sided empyema and large pericardial effusion. A 2D echocardiogram was obtained which showed large pericardial effusion with no evidence of tamponade. Her pleural fluid cultures showed *Streptococcus Pneumoniae*, and antibiotics were tailored to ceftriaxone. She was subsequently downgraded from the ICU to PCU. The following day she had a PEA arrest and ROSC was obtained after 1 round of CPR, however she remained in profound shock, requiring high doses of LR, norepinephrine, neosynephrine, epinephrine, vasopressin and dopamine. She was brought back to ICU for further management and due to suspicion for tamponade with previous findings of large pericardial effusion, STAT echo was obtained which did not show chamber collapse. However, clinical suspicion for tamponade remained high, and she underwent bedside pericardiocentesis which drained approximately 700 ml of frank purulent material.



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