Learning Objectives

• Identify patient with Re-expansion pulmonary edema (RPE) post-thoracocentesis
• Describe the management of a patient with Re-expansion pulmonary edema

Case Report

Case Presentation:

An 80-year-old man with history of hypertension, atrial fibrillation, congestive heart failure with preserved ejection fraction, and sacral decubitus ulcer was hospitalized for surgical debridement of his ulcer.

Hospital Course

• The patient developed health-care associated pneumonia and was treated with antibiotics and aggressive hydration.

• His pneumonia resolved within a few days, however the patient started complaining of difficulty breathing and cough with a new oxygen requirement of 3L/min via nasal cannula.

• His chest imaging showed bilateral pleural effusions refractory to diuresis (Fig 1).

• The patient underwent right-sided thoracocentesis, with removal of 2.5L of transudative fluid.

• He witnessed immediate improvement in his breathing, and the chest x-ray post-thoracocentesis showed significant reduction in the right pleural effusion. (Fig 2)

• Later that night, the patient developed dyspnea and hypoxia. On physical exam, he was tachypneic, tachycardic and his oxygen saturation was 67% on 3L/min via nasal cannula.

• Lung auscultation revealed new crackles on the right side extending to the apex, and remained unchanged on the left side.

• Repeated chest x-ray showed diffuse right-sided infiltrates, consistent with re-expansion pulmonary edema. (Fig 3)

• The patient was admitted to the intensive care unit and received BiPAP ventilation, as well as diuresis.

• Repeated imaging within five hours demonstrated significant reduction in the pulmonary edema, and the patient’s clinical condition improved markedly. (Fig 4)

• He was transitioned to supplemental oxygen via nasal cannula at 2L/min within 24 hours.

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