A 71-year-old man with hypertension, diabetes and atrial fibrillation is admitted to the hospital because of rapid atrial fibrillation. You are called to see him because he has developed worsening dyspnea. He takes warfarin, atenolol and glyburide and is allergic to penicillin. On arrival, you find him in moderate respiratory distress.

He is afebrile, and has a blood pressure of 110/60 Hg, heart rate of 96 beats a minute and respiratory rate of 24 per minute. His pulse oximeter reads 96% on 3L per minute of oxygen by nasal cannula. He has diminished breath sounds over his left lower lobe with egophony and increased fremitus. A chest radiograph shows a new left lower lobe consolidation. Pulmonary function tests are significant for an increased diffusing capacity for carbon monoxide. His leukocyte count is 8,000/micro L, hematocrit is 38%, platelet count is 230,000/m \(^3\), and international normalized ratio (INR) is 4.1.

What is the most likely cause of this patient's dyspnea?

A. Pleural effusion.
B. Pneumonia.

C. Pneumothorax.

D. Pulmonary edema.

E. Pulmonary hemorrhage.

The correct answer is E.

**Kaplan Medical explains why**

This patient has a supratherapeutic INR. A complication of this is hemorrhage, with the GI and pulmonary system being classical areas prone to bleeding. The patient’s lung exam with decreased breath sounds, egophony, and increased fremitus over the left lower lobe suggest consolidation within the left lower lobe. This finding is confirmed by the chest radiograph. The pulmonary function test results showing an increased diffusing capacity for carbon monoxide suggests that this consolidation is blood (the diffusing capacity is increased by the blood within the alveoli).
Why the other answers are wrong

**Choice A:** A pleural effusion becomes unlikely given the chest radiograph and the lung exam are consistent with consolidation and not an effusion.

**Choice B:** Pneumonia becomes unlikely given that the patient does not have an elevated WBC, is afebrile, and there is no mention of a cough. Pneumonia also is not consistent with an increased diffusing capacity for carbon monoxide.

**Choice C:** Pneumothorax becomes unlikely given the chest radiograph is negative for this condition. The patient also does not have any reported risks for this condition such as recent trauma or emphysema.

**Choice D:** Pulmonary edema is unlikely since the chest radiograph shows a consolidation, inconsistent with the "bat wing" appearance typical of pulmonary edema. The patient also has no history of congestive failure. There is also no mention of the physical stigmata one would expect with congestive failure such as crackles on the lung exam.

For more prep questions on USMLE Steps 1, 2 and 3, view other posts in this series.