Rapidly progressive pleural effusion

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TO THE EDITOR: Regarding the article about a man with rapidly progressive pleural effusion by Zoumot et al in the January 2019 issue,[1] there was some inconsistency between the teaching points and the actions taken.

Question 1 asked what was the most likely cause of the patient's pleuritic chest pain. Pulmonary embolism was an unlikely diagnosis, given the patient's presentation and his normal D-dimer level, which the text acknowledges, but then proceeds to state that computed tomographic angiography of the chest was done anyway.

After pleural effusion was diagnosed, question 2 asked what was the best management strategy for the patient at that time. The best management strategy was to give oral antibiotics with close follow-up because the patient was at low risk of a poor outcome, but he was advised to be admitted for intravenous antibiotics anyway.

I'm not quite sure of the point of the didactic exercise when actions are not consistent with the analytic rationale for testing and treatment.

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REFERENCES

1. **Zoumot Z, Wahla AS, Farha S**. Rapidly progressive pleural effusion. Cleve Clin J Med 2019; 86(1):21–27.

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IN REPLY: We thank Dr. Davidson for his comments. Indeed, the teaching points may appear inconsistent with the actual patient journey in this case. In the real world, physicians from different teams and specialties are involved in the care of a patient, and medical practice may not strictly adhere to guidelines.

In question 1, the emergency department physician decided to proceed with computed tomographic pulmonary angiography to rule out pulmonary embolism. Based on best practice guidelines, pulmonary angiography was not indicated, as the clinical pretest probability of pulmonary embolism was low, supported by the patient's negative D-dimer test. When we wrote the article, as we already had the scan, we used it to support the learning points in terms of findings on computed tomography at the early stage of a developing empyema, and also to support that the scan was in fact not indicated (not the other way around).

As for question 2, specific data-driven guidelines do not exist on how best to manage patients with bronchopneumonia with an early evolving parapneumonic effusion. In the text that follows question 2, we stated that management as an inpatient or outpatient would have been reasonable. Although we considered the patient at low risk for a poor outcome, we offered inpatient admission at the time for better control of his severe pleuritic pain (this could have been made clearer in the text), as well as close monitoring of his evolving parapneumonic effusion, and we do not believe that this contradicts the teaching points of this case.

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