

Iceberg in Small Pulmonary Embolism

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An 82-year-old man presented to our emergency department complaining of shortness of breath over recent days. He had a medical history of hypertension, dilated cardiomyopathy, and chronic atrial fibrillation. Electrocardiography showed atrial fibrillation with rapid ventricular rate. We carried out contrast-enhanced computed tomography due to his high Modified Well's scores and elevated D-dimer. This revealed a small filling defect over the left lateral basal segmental artery and posterior branch of the basal trunk of the right pulmonary artery with patent bilateral main pulmonary trunks. This was compatible with pulmonary embolism (Fig. 1A and B, arrow). The Pulmonary Embolism Severity Index was 112.¹ No vasopressor was needed after admission except oxygen supplement. Intravenous unfractionated heparin was given according to Raschke Nomogram.² Doppler was used for evaluation of the limbs, which showed no evidence of deep venous thrombosis. Standard transthoracic echocardiography (TTE) was used the next day, which disclosed one huge floating thrombus located over the right atrium (Fig. 1C). This moved into the right ventricle during diastolic phase (Fig. 1D). The patient

succumbed suddenly with pulseless electrical activity before the emergent operation. Emergent TTE showed disappearance of the floating thrombus and severe right ventricle dysfunction. Even though echocardiography is not recommended as a routine diagnostic test for PE, especially in hemodynamically stable subjects, this case serves as a reminder of the importance of TTE in PE patients. This is true not only in terms of right ventricle function evaluation, but also because it may facilitate the earlier identification and aggressive management of possible existing intra-cardiac thrombus.

References

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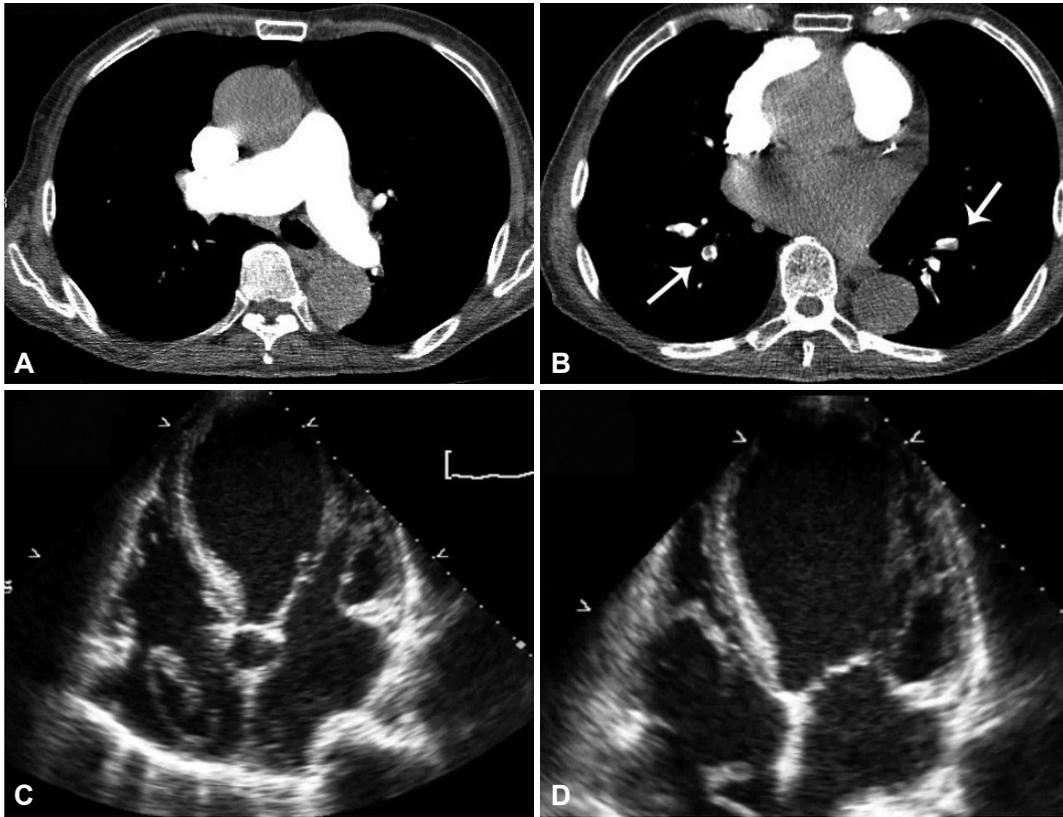


Fig. 1.