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A Thief Caught in the Act

- Free Floating Venous Thrombus in the Right Heart Associated With Pulmonary Embolism -

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A 65-year-old, previous healthy woman was referred for evaluation of exertional dyspnea that had developed three days prior. Radical hysterectomy had been done for cervical cancer, followed by reoperation for wound dehiscence 12 days before referral. Lower extremity edema was observed solely on the right side. Transthoracic echocardiography revealed serpentine, free-floating thrombus, starting from the inferior vena cava and extending to the right ventricle (RV) at diastole and the dilated RV showed systolic dysfunction (Fig. 1A, B and C). Computed tomography (CT) showed near total obstruction of pulmonary arteries and deep vein thrombosis of the right femoral vein (Fig. 1D and E). Administration of intravenous heparin with close monitoring was selected as the initial treatment, rather than thrombolysis or surgical embolectomy. This was due to the patient's stable vital signs, and most importantly, a history of repeated surgical operation and serious wound dehiscence with ongoing infective intraabdominal lymphocele. The thrombus disappeared 4 days later, though pulmonary hypertension remained (Fig. 1F and G). Oral anticoagulation treatment was started and the patient was markedly relieved of dyspnea 14 days later, with

significant improvement of RV function (Fig. 1H) and complete resolution of pulmonary thrombus as assessed 4 months later by CT (Fig. 1I).

Although the prognosis is more fatal for patients with pulmonary embolism that is associated with right heart thrombus,¹⁾ the efficacy of different treatments, including the use of anticoagulants, thrombolytic therapy,²⁾ or surgical embolectomy,³⁾ remains controversial.^{3,4)} In this case, given the patient's stable vital signs and past medical history, radical thrombolysis or thrombectomy was not performed, and fortunately she had an uncomplicated recovery.

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• The authors have no financial conflicts of interest.

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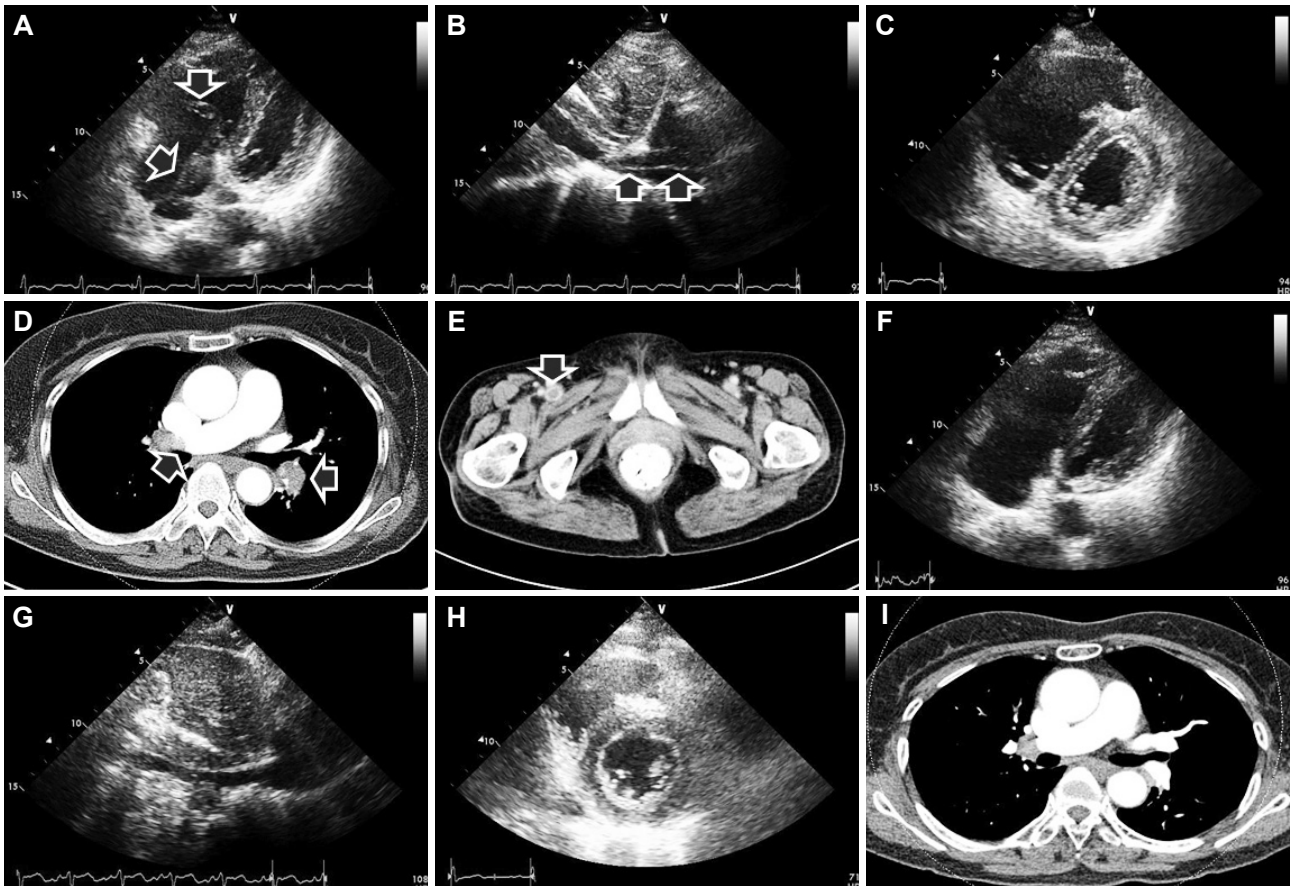


Fig. 1. Representative echocardiography and computed tomography images at initial presentation (A-E) and at follow-up (F-I). A and B: a large, serpentine, free-floating thrombus (arrows) was noted at the dilated right atrium and ventricle (A) and also, inferior vena cava (B). C: the right ventricle was dilated and compressed the left ventricle into a typical D-shape. D, E and F: thrombus was demonstrated clearly at both pulmonary arteries (arrows) (D) and also at the right femoral vein (arrows) (E) on computed tomography, confirming the diagnosis of pulmonary thromboembolism with concomitant deep vein thrombosis. F and G: the free-floating thrombus had disappeared from the right heart (F) and also, the inferior vena cava (G) 4 days after continuous intravenous heparin. H: the right and left ventricle had recovered into a normal configuration 14 days after oral anticoagulation. I: thrombus at pulmonary arteries had disappeared after 4 months of oral anticoagulation.