Floating Thrombi in The Right Ventricular Outflow Tract

Na Li 1,2, Osamah Alwalid1,2 and Heshui Shi1,2*

1Department of Radiology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, 1277 Jiefang Avenue, Wuhan, Hubei Province 430022, The People’s Republic of China.
2Hubei Province Key Laboratory of Molecular Imaging, Wuhan 430022, The People’s Republic of China

*Corresponding author:
Heshui Shi,
Department of Radiology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430022, Hubei Province, China, E-mail: heshuishi@hust.edu.cn

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1. Clinical Image

A 51-year-old woman was admitted to the hospital for an intermittent syncope. No abnormal findings on physical examination. Laboratory results showed B-type brain natriuretic peptide of 1044.0 pg/ml (reference range, < 100), D-Dimer of 5.69 mg/L (reference range, < 0.5), FDP of 19.0 ug/ml (reference range, < 5), and blood NT-proBNP of 2580.0 pg/ml (reference range, < 125). Electrocardiogram demonstrated sinus rhythm, left axis deviation, and abnormal T-wave.

Echocardiography showed a streak-like echo in the right ventricle and right ventricular outflow tract (RVOT) with widened pulmonary artery and severe pulmonary hypertension. Deep venous ultrasound of both lower extremities revealed left superficial femoral vein, posterior radial vein, peroneal vein and intermuscular veins thrombosis. Cardiac magnetic resonance imaging cine sequence revealed two long linear hypointense structures within the RVOT (arrow; A) that moved in synchrony with the cardiac motion (see video). Meanwhile, multiple bilateral pulmonary artery thrombi were seen on CMR. Three days later, computed tomographic pulmonary angiography (CTPA) revealed multiple bilateral pulmonary artery emboli (arrows; B), but no abnormal density was seen in the RVOT (C). On repeated echocardiography, no abnormal echo was seen in the RVOT. Therefore, it was highly likely that the floating thrombi in the RVOT were dissolved due to anticoagulation therapy throughout her hospitalization.

The patient was discharged with improved symptoms after anticoagulation therapy. After one month of Rivaroxaban tablets use, the pulmonary thrombi have reduced in size.

Figure: Floating thrombi in the RVOT. (A) Cardiac magnetic resonance imaging cine sequence shows two long linear hypointense structures within the RVOT (arrow) that moved in synchrony with the cardiac motion (video). (B,C) CT pulmonary angiography shows bilateral pulmonary artery emboli (arrows), but no abnormal density is seen in the RVOT.