

Right atrial thrombus from inferior vena cava after acute cardiotoxicity of 5-Fluorouracil

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Abstract

We reported a case of large right atrial thrombus which migrated from the inferior vena cava after acute left ventricular dysfunction due to 5-Fluorouracil cardiotoxicity. The patient had recurrent episodes of chest pain and dyspnea suggestive of pulmonary thromboembolism and several days later control echocardiography showed that the right atrial thrombus had disappeared. The patient was discharged with oral anticoagulant therapy with no further clinical sequelae during an 11 month period but died because of progression of metastatic processes. We hypothesized that initial congestive heart failure had been a provocative factor for thromboembolic events from previous thrombus formation at the inferior vena cava. (Cardiol J 2008; 15: 284–285)

Key words: pulmonary thromboembolism, left ventricular dysfunction

A 55-year-old woman with colon cancer presented at the Cardiology Department with acute pulmonary oedema after starting Leucovorin and 5-Fluorouracil therapy. The electrocardiogram at admission showed sinus tachycardia and down-sloping ST-depression in antero-lateral leads. Echocardiography revealed left ventricular systolic dysfunction with global hypokinesia. Acute cardiotoxicity of 5-Fluorouracil was diagnosed.

Five days later, after partial improvement of left ventricular function, the large thrombus floating in the right atrium (Fig. 1) with prolapse into the right ventricle was observed (Fig. 2). Doppler sonography revealed infiltration, probably metastases of the whole inferior vena cava, covered with thrombus formation. Intravenous heparin was administered.

On control echocardiography four days later, the right atrial thrombus was not visualized. Meanwhile, the patient had recurrent episodes of chest pain and dyspnea suggestive of pulmonary thromboembolism. She was discharged with oral anticoagulant therapy with no further clinical sequelae during an 11 month period but died because of progression of metastatic processes.

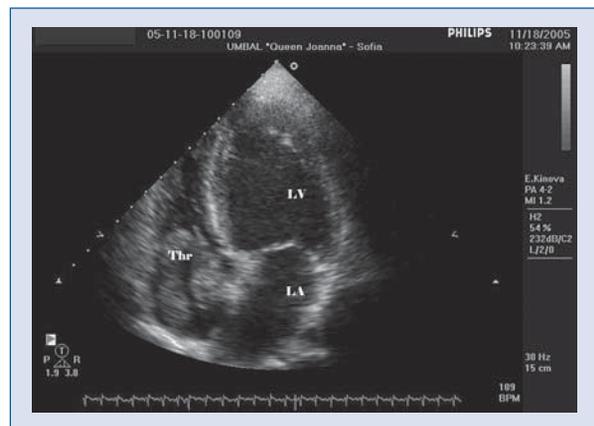


Figure 1. Large thrombus floating in the right atrium; Thr — thrombus, LV — left ventricle, LA — left atrium.

This case began with pulmonary oedema as a consequence of myocardial dysfunction [1] due to 5-Fluorouracil cardiotoxicity [2]. Acute left ventricular failure is a rare clinical feature of 5-Fluorouracil cardiotoxicity. The incidence of cardiac side effects of 5-Fluorouracil has been reported to be

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Figure 2. Large thrombus with prolapse into right ventricle; Thr — thrombus, LV — left ventricle, LA — left atrium.

1.2–7.6% [3], and myocardial ischemia is the usual known clinical manifestation [2, 3]. A large thrombus into the right cavities is an unexpected echocardiographic finding when a patient status is stabilized. Control echocardiography has played a crucial role for detecting the floating thrombus and starting anticoagulant therapy. Pulmonary thromboembolism in such a case with a large thrombus is

expected to cause dramatic hemodynamic deterioration [4], but it had a benign course. We hypothesized that initial congestive heart failure was a provocative factor for thromboembolic events from a previous thrombus formation at the inferior vena cava.

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