Abstract: P601

Pulmonary embolism, free-floating thrombus and thrombocytopenia

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Introduction: Data on the management of pulmonary embolism, especially regarding the use of thrombolytic in patients with thrombocytopenia is lacking. Also, in patients with mobile heart thrombi, the therapeutic benefits of thrombolysis remain controversial.

This case demonstrates the therapeutic challenges encountered when managing an acute pulmonary embolism in a patient with thrombocytopenia and mobile heart thrombi.

Description and management: A 66-year old female with history of deep venous thrombosis 6 months before presented to the emergency department for severe dyspnoea, syncope and hypotension. Upon arrival, systolic blood pressure was 80 mmHg, heart rate was 110/min, oxygen saturation was 82% in ambient air. She was pale, diaphoretic. Pulmonary examination was unremarkable, and peripheral pulse was weak. The initial electrocardiogram showed atrial fibrillation at a rate of 110-115/min, S1Q3T3, 1 mm ST elevation V1-V3 and T negative waves in V1-V4. Transthoracic echocardiography demonstrated severe right ventricular dilation and dysfunction, tricuspid regurgitation, pulmonary artery pressure of 55 mmHg, left ventricle with normal size, contractions and ejection fraction >55%, right and left atrial thrombus. Pulmonary CT angiography confirmed bilateral massive pulmonary embolism. Laboratory findings showed moderate thrombocytopenia -97.330 /µl. Since hemodynamic compromise resulting from massive pulmonary embolism was present we decide thrombolysis with Alteplase (100 mg infusion over a 2 hours period). We also administrated positive inotropic drug and saline infusion. After thrombolysis in approximatively 2 hours the inotropic drug was discontinued, blood pressure was 115/70 mmHg, heart rate was 100 beats/min, sinus rhythm, oxygen saturation was 90% in ambient air. Platelet count decreased in the first 48 hours after thrombolysis with a minimum level of 64.650 /µl. After three days platelet increased to 92.000/µl and at two weeks after thrombolysis platelets were 132.000/µl. Patient continue to improve clinically and the echocardiography at discharge showed mild right ventricular enlargement and pulmonary artery pressure was 20-25 mmHg. Transesophageal echocardiography performed at 7 days after thrombolysis showed no thrombus in right or left atrium, and a patent foramen ovale.

Conclusion: Thrombolysis has been demonstrated to decrease mortality in a subgroup of patients with massive pulmonary embolism and hemodynamic instability, but few data are available in patients with thrombocytopenia. The contraindication of thrombolysis should be considered in these patients but also weighed against the severity of the patient’s condition.