

Paradoxical embolism in a young man: a case report

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Introduction: Paradoxical embolism referring to venous thromboembolism traversing through intra-cardiac shunt into systemic circulation is an important clinical entity.¹ Depending on the site of embolism it can result in ischemic stroke, myocardial infarction, embolization of abdominal or limb arteries. It represents around 2% of all cases of arterial embolizations.² Patent foramen ovale is the most common intracardiac shunt that can be found in up to 30% of population and its presence is strongly related to paradoxical embolism.^{1,2}

Case report: 44-year-old male with no significant medical history was admitted to Emergency Department because of left arm pain and coldness with absent radial pulse. In addition, patient reported exertional dyspnea over the past three days. Examination and imaging revealed thromboembolism of distal part of left subclavian artery, axillar and brachial artery with saddle pulmonary embolism (PE) and embolism in distal parts of left and right pulmonary arteries, lobar, segmental and subsegmental arteries with deep popliteal vein thrombosis. Initial echocardiographic examination showed right ventricular dysfunction with interatrial septal aneurism and suspected defect. Although PE was of intermediate low risk it was decided to apply systemic thrombolysis (using recombinant tissue-type plasminogen activator). Therapy went without complications with complete resorption of saddle thrombus in main pulmonary artery with only partial resorption of arm thrombus, so Fogarty arterial embolectomy was indicated. Transesophageal echocardiography with agitated saline injection and Valsalva maneuver revealed patent foramen ovale. After initial treatment with therapeutic dose of enoxaparin rivaroxaban was initiated.

Conclusion: In a case of concomitant venous and arterial embolization it is important to search for intracardiac shunts. Transesophageal echocardiography is reference method in shunt detection. Treatment of paradoxical embolism includes antithrombotic and anticoagulant treatment, percutaneous closure devices or surgical treatment.

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LITERATURE

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