Right heart complications of ventriculoatrial shunt

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A 57-year-old male patient was treated in the intensive therapy unit for pneumonia and new-onset atrial fibrillation. He had a ventriculoatrial (VA) shunt since childhood which was placed for hydrocephalus. He had no other medical problems and had been lost to follow-up. Trans-thoracic echocardiography (Panel A) revealed significant calcific tricuspid stenosis, a dilated right atrium (RA), an unusually large right atrial appendage (RAA), and an aneurysmal interatrial septum. Subsequent transoesophageal echocardiography (Panels B–D) confirmed severe tricuspid stenosis with a mean gradient of 5 mmHg and turbulent transvalvular Doppler flow (Panel C). Furthermore, a mobile mass was noted at the tip of the VA shunt (Panels B–D, arrow) that was best visualized on the bicaval view (Panel D, arrow). This was most likely the result of an inflammatory response and thrombus. There was minimal tricuspid regurgitation and no pulmonary hypertension. Blood and urine cultures proved negative and empirical antibiotic therapy was given for 2 weeks. The patient made a good recovery and was discharged with anticoagulation and beta-blockers. At 6-monthly follow-up, he was found to be asymptomatic. Right heart complications can occur years after VA shunt placement. If symptomatic tricuspid stenosis develops, percutaneous valvuloplasty or surgical valve replacement should be considered. Surveillance of patients with VA shunts is currently poorly defined. There is also a paucity of published literature regarding the same. Our case illustrates the need for long-term clinical and echocardiographic follow-up in patients with VA shunts.

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CARDIOVASCULAR FLASHLIGHT

doi:10.1093/eurheartj/ehr164
Online publish-ahead-of-print 24 May 2011