Extreme severe tricuspid regurgitation in a patient with the first clinical manifestation of right ventricular failure: a case report

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**INTRODUCTION:** The aim of this study is to demonstrate unrecognized tricuspid regurgitation leading to heart failure.1-4 We would like to point out the importance of the ultrasound examination of the heart in detecting severe tricuspid regurgitation.

**CASE REPORT:** 81-years-old patient was admitted to the hospital because of the first clinical manifestation of right ventricular failure. He had acute myocardial infarction in 2009. He hasn’t seen a doctor in 14 years. On admission, he had dyspnea and bradyarrhythmia and massive pretibial edema. NT-proBNP was over 12000 pg/ml. The therapy includes a diuretic, bronchodilator, ACE inhibitor and other necessary drugs. He already has atrial fibrillation, and he is already on oral anticoagulant therapy. 12-lead ECG: dextrogram, atrial fibrillation with ventricular response around 60/beats per minute, right bundle branch block. Echocardiography: aorta normal, left atrium enlarged ([**Figure 1**](#fig1)); diastolic dysfunction, mitral regurgitation 3-4+ (EROA 0.3 cm² and RVol 56ml) ([**Figure 2**](#fig2)); left ventricular ejection fraction 45%, inferior wall akinesis; right atrium and right ventricle are extremely enlarged with spontaneous echo contrast ([**Figure 3**](#fig3)); tricuspid leaflets impaired coaptation, severe TR 4+ in two jets with SPDK=80mmHg ([**Figure 4**](#fig4)); inferior vena cava greatly expanded (about 40mm); vena contracta 15mm. Roentgenogram of lungs and heart: bilateral pleural effusion. Abdominal ultrasound: signs of liver congestion, VCI diameter 42 mm; ascites fluid perihepatic and perisplenic. Therapy at hospital discharge: furosemide, spironolactone, direct oral anticoagulant therapy, ACE inhibitor with mandatory prophylaxis of bacterial endocarditis.

**CONCLUSION:** This case report indicates the importance of regular visits to the cardiologist, as well as the importance of timely diagnosis to prevent unwanted cardiac events.

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**FIGURE 1.** Enlarged left atrium.

**FIGURE 2.** Severe mitral regurgitation.
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Figure 3. Enlarged right atrium and right ventricle with spontaneous echo contrast.

Figure 4. Severe tricuspid regurgitation.

LITERATURE