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 at 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**), diastolic dysfunction, mitral regurgitation 3-4+ (EROA 0.3 cm^2 and RVol 56ml) (**Figure 2**); left ventricular ejection fraction 45%, inferior wall akinesis; right atrium and right ventricle are extremely enlarged with spontaneous echo contrast (**Figure 3**); tricuspid leaflets impaired coaptation; severe TR 4+ in two jets with SPDK=80mmHg (**Figure 4**); 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.

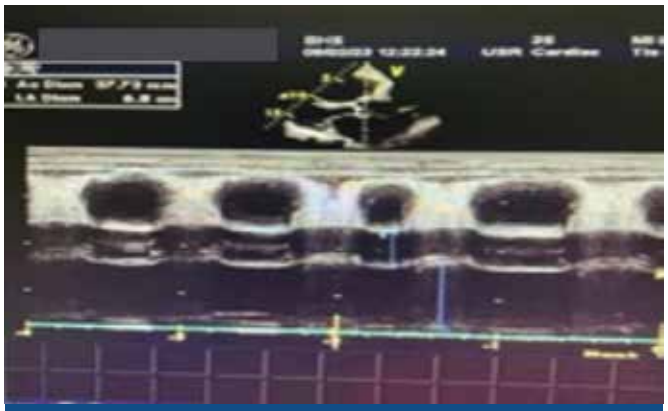

FIGURE 1. Enlarged left atrium.

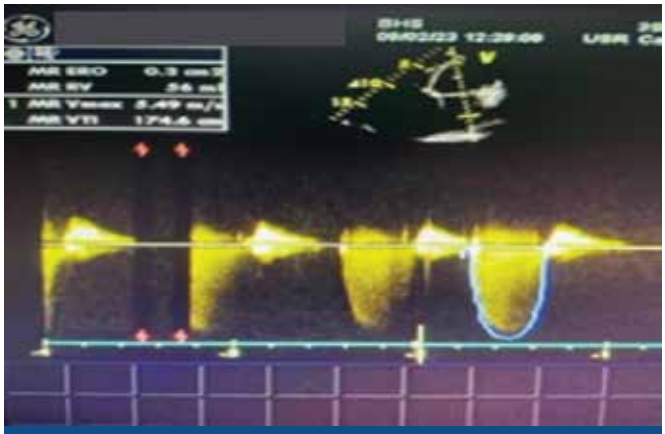

FIGURE 2. Severe mitral regurgitation.

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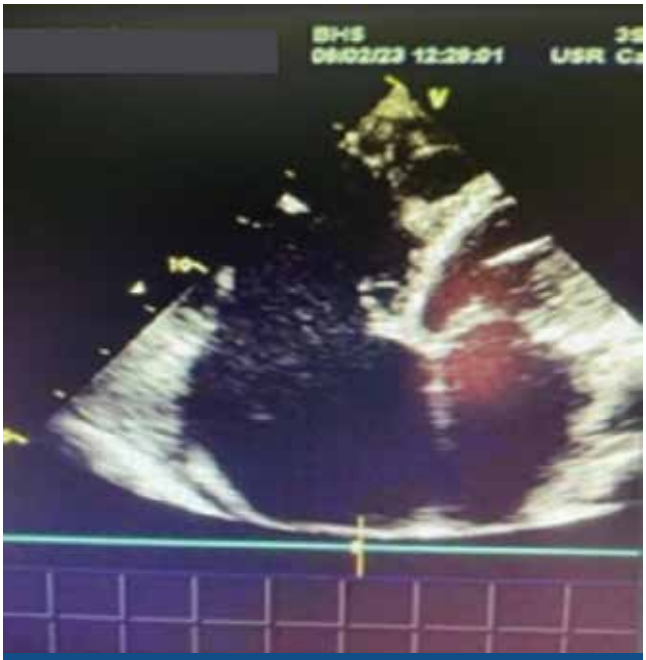

FIGURE 3. Enlarged right atrium and right ventricle with spontaneous echo contrast.

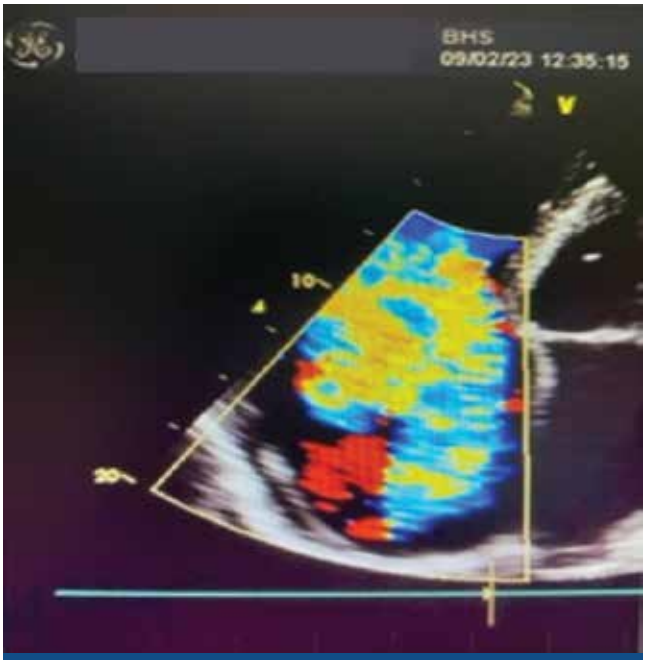

FIGURE 4. Severe tricuspid regurgitation.

LITERATURE

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