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A CASE OF REVERSE TRANSIENT ISCHEMIC DILATATION

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Introduction

Transient ischemic dilatation (TID) is a phenomenon that occurs when there is subendocardial ischemia and the post-stress tomograms show a larger left ventricular cavity size compared to the rest images. We present a rare case of reverse TID in which the opposite findings are seen.

Case Report

A 65-year-old female with a past medical history of hypertension was admitted for left-sided chest pain. An electrocardiogram and three sets of cardiac enzymes were negative. Single-photon emission computed tomography (SPECT) with regadenoson was negative for ischemia. The patient was in atrial fibrillation at 131 bpm during stress imaging (Figure 1), while on rest imaging she was in sinus bradycardia at 59 bpm (Figure 2). Stress images showed a smaller left ventricular cavity (ungated volume of 32 mL) and thicker wall compared to the rest images (ungated volume of 56 mL) (Figures 3, 4). TID ratio was 0.57. Reverse TID occurs with tachyarrhythmias during stress imaging, in which a reduction in diastolic filling time and higher counts obtained during systole lead to a smaller LV size, and bradycardia during rest imaging, where longer diastolic filling time and higher counts obtained during diastole lead to a larger LV size.^{1,2} The clinical significance is unknown.



Figure 1. Rhythm strip showing atrial fibrillation during stress (heart rate = 131 bpm).



Figure 2. Rhythm strip showing sinus bradycardia during rest portion of nuclear stress test (heart rate = 59 bpm).

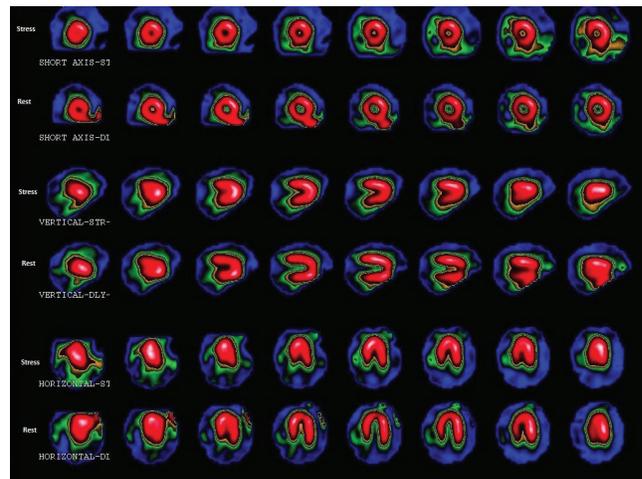


Figure 3. Stress images show a smaller and thicker left ventricle compared to the resting images.

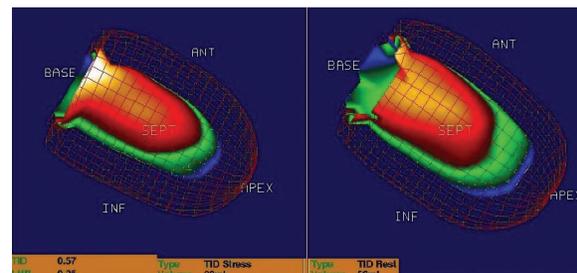


Figure 4. Stress image on left shows smaller left ventricular size (ungated volume of 32 mL) compared to the rest image on right (ungated volume of 56 mL).

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