

Subendocardial Infarction in Acute Aortic Regurgitation

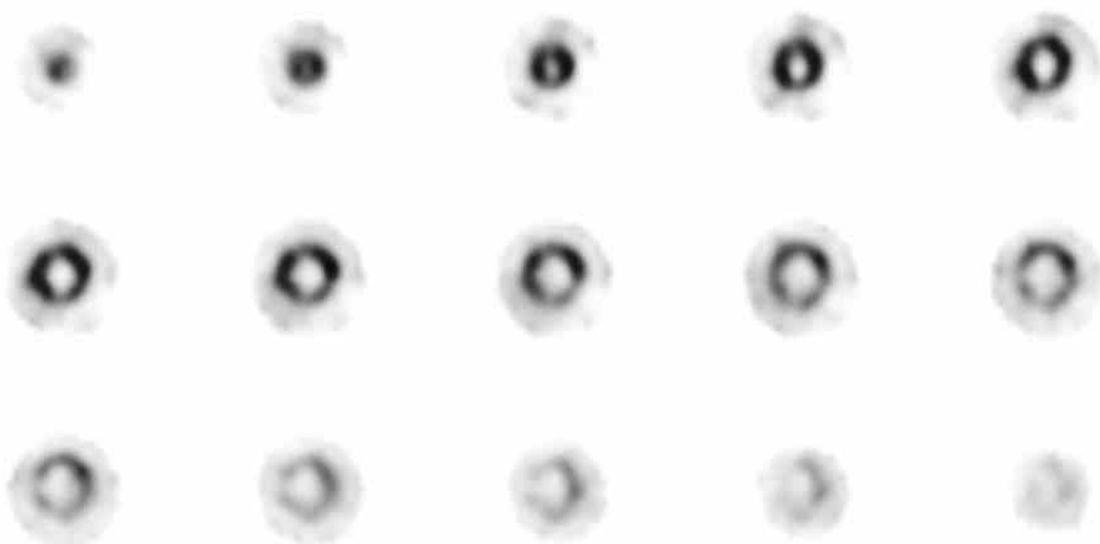
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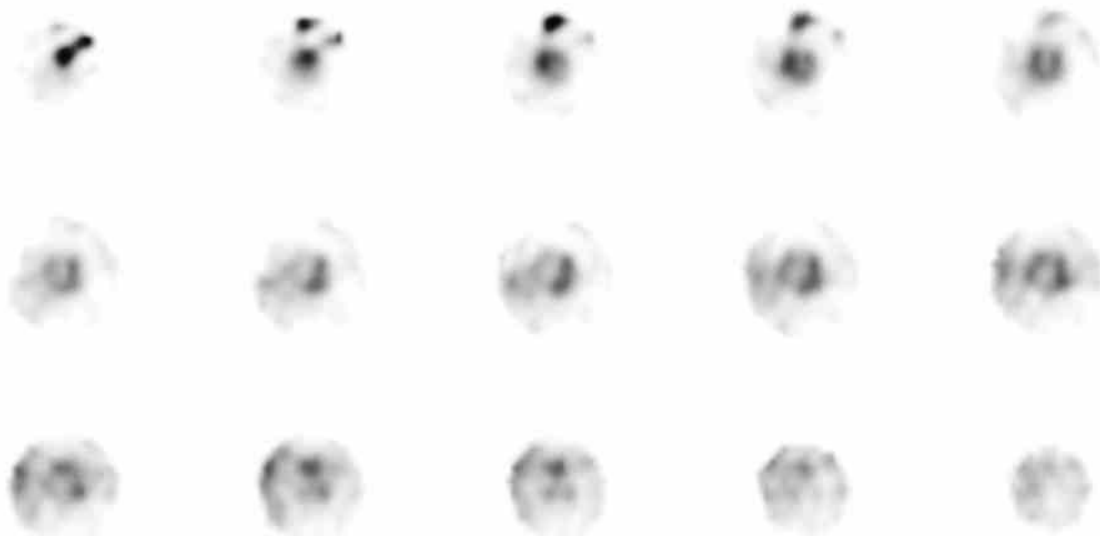
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Clinical Image

A



B



Description

A 46-year-old man presented with orthopnea. The oxygen saturation was 77% in ambient air. An electrocardiogram showed diffuse ST-segment depressions in all leads but aVR and V1. A chest radiograph showed severe pulmonary edema without cardiac enlargement or pleural effusion. The levels of cardiac enzymes were elevated (i.e., creatine kinase, 1108 U/L). Echocardiography showed a left ventricular ejection fraction of 40% and severe aortic valve regurgitation. The patient was finally diagnosed with acute heart failure due to acute aortic regurgitation without coronary stenosis. Dual imaging with thallium-201 (Figure A) and Tc-99m pyrophosphate (Figure B) showed the circumferential uptake of Tc-99m, a finding suggestive of left ventricular subendocardial infarction. Subendocardial infarction without coronary stenosis is well known in aortic stenosis [1, 2], but extremely rare in the setting of aortic regurgitation. A proposed explanation is that acute aortic regurgitation increased left ventricular end-diastolic pressure and decreased coronary perfusion pressure.

References

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Manuscript Information: Received: January 21, 2015; Accepted: February 15, 2016; Published: February 18, 2016

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Citation: Sato Y, Kawasaki T, Kamitani T, Sugihara H. Subendocardial infarction in acute aortic regurgitation. *Open J Clin Med Case Rep.* 2016; 1080

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