THE AMERICAN JOURNAL of MEDICINE®

D-Shaped Left Ventricle Seen on Gated Single-photon Emission Computed Tomography Is Suggestive of Right Ventricular Overload: The So-called Movahed's Sign

To the Editor:

In the article by De Lorenzo et al[1] entitled "A Not So Obvious Cause of Chest Pain: Pulmonary Hypertension," they describe an image showing right ventricular enlargement that was seen on gated single-photon emission computed tomography (SPECT) images in a patient with pulmonary hypertension.

However, they failed to recognize the classic D-shaped left ventricle in their images and the fact that this phenomenon has been well described as a very specific sign of right ventricular overload,[2] is now accepted as the so-called Movahed's sign,[3] and should be routinely assessed during interpretation of gated SPECT studies. In the initial publication of this phenomenon,[2] this sign was found to be very specific for right ventricular overload and was even more common than echocardiography in visualizing the D-shaped left ventricle. We believe that assessment of the septum shape during gated SPECT should be routinely performed to avoid missing a not so obvious cause of potentially treatable life-threatening chest pain, such as pulmonary hypertension or pulmonary embolism.

Mohammad Reza Movahed, MD, PhD
Care More, Ariz
University of Arizona Sarver Heart Center
Tucson, Ariz

http://dx.doi.org/10.1016/j.amjmed.2014.08.032

Funding: None.
Conflict of Interest: None.
Authorship: The author had access to the data and played a role in writing this manuscript.

References

1. De Lorenzo A, Lessa C, Camargo G, Gottlieb I, Lima RS. A not so obvious cause of chest pain: pulmonary hypertension. *Am J Med*. 2014;127:605-607.
2. Movahed MR, Hepner A, Lizotte P, Milne N. Flattening of the interventricular septum (D-shaped left ventricle) in addition to high right ventricular tracer uptake and increased right ventricular volume found on gated SPECT studies strongly correlates with right ventricular overload. *J Nucl Cardiol*. 2005;12:428-434.
3. Murarka S, Movahed MR. Review of Movahed's sign (D shaped left ventricle seen on gated SPECT) suggestive of right ventricular overload. *Int J Cardiovasc Imaging*. 2010;26:553-557.