

Importance of patient positioning in left ventricular function assessment

Dear Editor,

We have read with great interest the papers by Elisabeth Coupez et al.¹ and Dayong Wu et al.² recently published in the Journal Nuclear Cardiology, in which ventricular function and synchronicity were assessed by D-SPECT.

This novel CZT-camera allows acquisition of both supine and upright positions. From our point of view, there are a number of relevant issues worthy of consideration.

It is well known that the values obtained by measuring ejection fraction and ventricular volumes depend on the patient position during acquisition.^{3,4} Recently Michael Tribular et al.⁵ described that volumes and ejection fraction are higher in supine compared to upright position on D-SPECT, and we have observed the same finding in our practice.

In our lab, we have compared ejection fraction, ventricular volumes, and synchrony in supine and upright position in 143 consecutive patients with normal perfusion and we found that not only ejection fraction and ventricular volumes are different, but also synchrony values are twenty percent higher in upright position ($p < 0.001$). We believe these findings could be explained by physiological changes such as the variation in venous return and heart rate among other unknown factors.

Therefore, we consider that the assessment of the mentioned parameters should be done in supine position in order to be able to compare them with other cardiac techniques that are routinely acquired in supine position.

Best regards,

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