

Cardiologist Point of View on the Exercise Echocardiography and Multidetector Computed Tomography for the Evaluation of Acute Chest Pain. Response



La perspectiva del cardiólogo sobre la evaluación del dolor torácico agudo mediante ecocardiografía de ejercicio y tomografía computarizada multidetectores. Respuesta

To the Editor,

We appreciate Dr. Catalan's interest and comments on reports recently published in *Revista Española de Cardiología*.^{1,2} Multidetector computed tomography (MDCT) is evolving at such a rapid pace that it is difficult to obtain an updated clinical validation of the technique. The technology that existed in 2008 was inferior to that available today, in terms of both image quality and the radiation doses administered. Thus, it is quite possible that our results could have been improved by the use of more modern systems. However, the radiation dose administered was 9.4 ± 5.1 mSv (mean \pm standard deviation), which is within the recommended range.

With respect to the reconstruction protocol employed, we insist that the slice thickness of 0.7 mm represents the standard thickness in studies carried out in 2008 involving systems very similar to ours, which, it should be remembered, has a shorter than usual rotation time.³ Although this thickness leads to a slight reduction in the spatial resolution, the signal-to-noise ratio in images obtained with 0.7-mm reconstruction is superior to that achieved with 0.6 mm. This produces a sharper view of the vessel borders when the temporal resolution is suboptimal.⁴

Aside from measures for controlling the heart rate and patient preparation, which, as Dr. Catalán correctly points out, are crucial for a good result and which we always optimize in our routine practice, we insist that each center should adapt its study protocol to the available technology and to the cumulative experience in its use. In our center, the collaboration between cardiologists and radiologists has been a key factor in ensuring that the MDCT technology available at any given moment be applied in accordance with quality standards and in the most appropriate population.

Up to 2012, the major randomized studies showed that the use of MDCT has contributed to expediting the early discharge of

patients and to reducing their stay in the emergency department, but the findings on the associated costs are contradictory.^{5,6} Moreover, it has not been possible to demonstrate a net benefit in terms of the prevention of adverse cardiac events with an MDCT-based strategy compared with conventional management or functional assessment.⁷ In short, there is a need for new studies that determine whether the latest MDCT technology has anything further to contribute in this scenario.

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