Splenic response ratio in vasodilator myocardial perfusion imaging

The use of splenic response ratio (SRR) by Bami et al.¹ as a metric for adequacy of vasodilator stress and its additional application as a prognostic marker in patients with relatively normal rubidium (Rb) positron emission tomography (PET) myocardial perfusion imaging (MPI) studies is a very logical extension of SRR use in cardiac magnetic resonance (MR) studies. Obviously, that is very helpful—essential, in fact—to ensure that the investigation is valid (and justified). PET, currently, is relatively uncommon compared to single-photon emission-computed tomography (SPECT) with Tc99m-sestamibi for MPI. With these acquisitions, invariably, there is not an adjunct MR to assess for SRR. How, then, can we ensure adequacy of the vasodilator stress imaging?

It has also been anecdotally said that symptomatology can reflect vasodilator adequacy. This is estimated to only be present in 80% of patients according to current guidelines/review on stress protocols and tracers issued by the American Society of Nuclear Cardiology.² It was also noted here the mean changes in haemodynamic parameters although this may not necessarily be a reflection of vasodilator adequacy. Although it was not part of the central objective of the study, haemodynamic parameters were not found to be a significant factor consistently to enable detection of myocardial ischaemia with so-called traditional MPI.³ That being the case, how can we ensure an adequate

stress response? Do the authors have any other suggestions?

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Disclosures

Joseph C. Lee and Nathan Better declare no conflict of interest.

References

1. Bami K, Tewari S, Guirguis F, Garrard L, Guo A, Hossain A, et al. Prognostic utility of splenic response ratio in dipyridamole PET myocardial perfusion imaging. *J Nucl Cardiol* 2019;26:1888-97.
2. Henzlova MJ, Duvall WL, Einstein AJ, Travin MI, Verberne HJ. ASNC imaging guidelines for SPECT nuclear cardiology procedures: Stress, protocols, and tracers. *J Nucl Cardiol* 2016;23:606-39. *J Nucl Cardiol* 2016;23:640-2.
3. Lee JC, Fraser JF, Barnett AG, Johnson LP, Wilson MG, McHenry CM, et al. Effect of caffeine on adenosine-induced reversible perfusion defects assessed by automated analysis. *J Nucl Cardiol* 2012;19:474-81.

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