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Quantitative stress-redistribution sequential imaging optimises MPI with the lowest dose of radiation per patient

Richard M Fleming,[1] Matthew R Fleming,[1] Tapan K Chaudhuri,[2] Andrew McKusick[3]

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[1]Cardiology, FHHI-OmnificImaging-Camelot, El Segundo, California, USA
[2]Radiology, Eastern Virginia Medical College, Norfolk, Virginia, USA
[3]Nuclear Imaging, Sebec Consulting & Media, Rock Hill, South Carolina, USA

Correspondence to
Dr Richard M Fleming; rmfmd7@yahoo.com

The authors wish to congratulate Winchester *et al*[1] for their recognition of increasing the use of a stress-only approach to myocardial perfusion imaging (MPI). Prior to the introduction of technetium-99m (Tc-99m) isotopes, it was common to inject a single dose of isotope and conduct serial images to look for redistribution to determine if ischaemia or infarction was present.

With the introduction of Tc-99m isotopes in the late 1980s, clinicians were told that the era of redistribution had passed and two doses of isotope would be required to conduct stress-rest[2] imaging. With the development of quantitative[3] MPI (figure 1), it has become clear that even Tc-99m isotopes redistribute, making it possible to compare serial images following a single dose of Tc-99m isotopes given after stress.

Work by Winchester *et al*[1] demonstrates how we can further reduce the radiation dose United States patients and staff are exposed to achieving parity with the worldwide practice of MPI.[4 5] The incorporation of lower stress isotope dose and quantification of redistribution as shown in figure 1, provide optimal MPI with the least amount of radiation exposure.

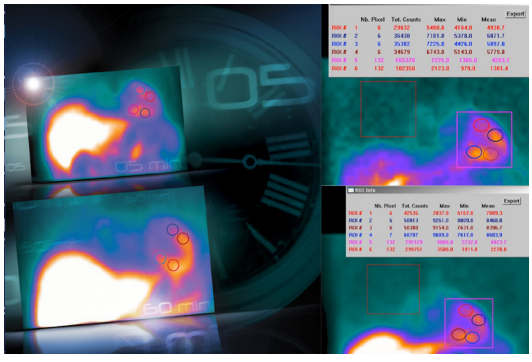

Figure 1 Quantification of Tc-99m isotope redistribution from 5 to 60 min post-stress allows a single dose of isotope to be given post-stress. Figure reproduced with the permission of the authors. Tc-99m, technetium-99m.

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Competing interests FMTVDM was issued to the primary author. Figure reproduced with expressed consent.

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