

Myocardial viability assessment using nuclear imaging

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Myocardial assessment continues to be an issue in patients with coronary artery disease and left ventricular dysfunction. Nuclear imaging has long played an important role in this field. In particular, PET imaging using ^{18}F -fluorodeoxyglucose is regarded as the metabolic gold standard of tissue viability, which has been supported by a wide clinical experience. Viability assessment using SPECT techniques has gained more wide-spread clinical acceptance than PET, because it is more widely available at lower cost. Moreover, technical advances in SPECT technology such as gated-SPECT further improve the diagnostic accuracy of the test. However, other imaging techniques such as dobutamine echocardiography have recently emerged as competitors to nuclear imaging. It is also important to note that they sometimes may work in a complementary fashion to nuclear imaging, indicating that an appropriate use of these techniques may significantly improve their overall accuracy. In keeping these circumstances in mind, further efforts are necessary to further improve the diagnostic performance of nuclear imaging as a reliable viability test.

Key words: myocardial viability, PET, SPECT