FDG gated cardiac PET at rest and immediately after dobutamine stress

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Cardiac gated FDG PET images after injection of tracer at rest show (1a) relatively preserved tracer uptake (60 % of the maximum in the myocardium, inferior wall) in the anterior wall with marked hypokinesia. Images following dobutamine stress (up to 20 $\mu\text{g/kg/min}$ in 3-min steps) with no further injection of FDG reveal (1b) an apparent reduction in tracer uptake (40 % of the maximum in the myocardium, inferior wall) in the anterior wall (apical and mid-cavity segments) extending into the septum and apex. The left ventricular ejection fraction was measured at 56 % on both occasions. Gated cardiac FDG PET is a valuable tool [1] to assess patients with coronary artery disease when searching for viable myocardium [2]. Resting myocardial perfusion gated SPECT to search for viability in the anterior wall showed a perfusion defect with severe hypokinesia (1c). Gated cardiac FDG PET imaging at rest and after inotropic stress (with a single injection of FDG) demonstrates post-infarct viability in the anterior wall. The reduced contractility in the mid-cavity

and apical segments of the anterior wall after inotropic stress with improvement at rest mimics ischaemia.

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