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Titel des Beitrags: [68Ga]-albumin-PET in the monitoring of left ventricular function in murine models of ischemic and dilated cardiomyopathy: comparison with cardiac MRI.

Abstract: The purpose of this study is to evaluate left ventricular functional parameters in healthy mice and in different murine models of cardiomyopathy with the novel blood pool (BP) positron emission tomography (PET) tracer [68Ga]-albumin. ECG-gated microPET examinations were obtained in healthy mice, and mice with dilative (DCM) and ischemic cardiomyopathy (ICM) using the novel BP tracer [68Ga]-albumin (AlbBP), as well as [18F]-FDG microPET. Cine-magnetic resonance imaging (MRI) examination performed on a clinical 1.5-T MRI provided the reference standard measurements. When considering the combined group of healthy controls, DCM and ICM AlbBP-PET significantly overestimated the magnitudes of EDV (AlbBP, 181±86 ?l; cine-MRI, 125±80 ?l; P<0.001) and ESV (AlbBP, 136±92 ?l; cine-MRI, 96±77 ?l; P<0.001), whereas the EF (AlbBP, 31±16%; cine-MRI, 33±21%; P=0.910) matched closely to cine-MRI results, as did findings with [18F]-FDG. High correlations were found between the measured cardiac parameters (EDV: R=0.978, ESV: R=0.989, and LVEF: R=0.992). Measuring left ventricular function in mice with [68Ga]-albumin BP PET is feasible and showed a high correlation compared to cine-MRI.
which was used as a reference standard.