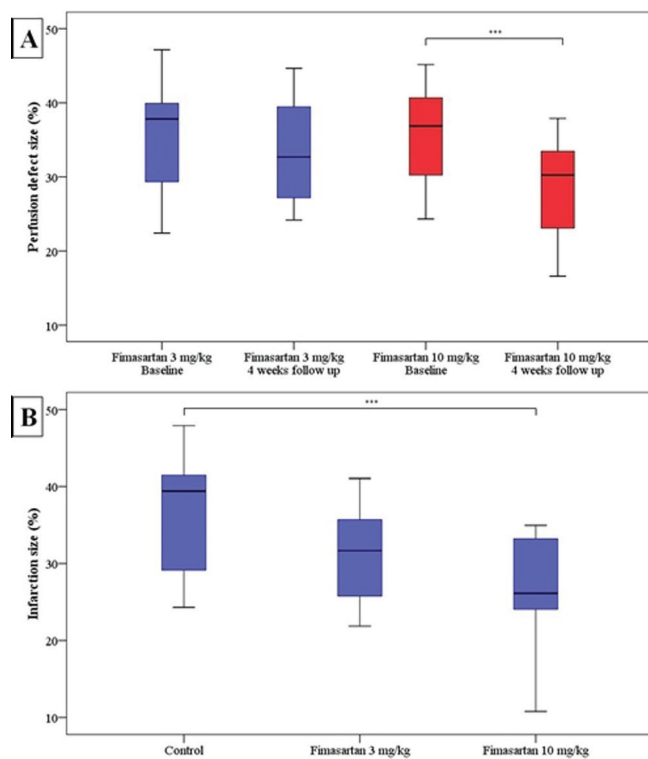


mg/kg induced only insignificant reduction of perfusion defect size ($35.89 \pm 7.89\%$ to $33.90 \pm 7.27\%$, $p=0.095$). By 2, 3, 5 – triphenyltetrazolium chloride staining, infarction size was the largest in control group ($36.45 \pm 8.28\%$), and was insignificantly lower in fimasartan 3 mg/kg group ($31.48 \pm 6.51\%$, p for difference between control group = 0.146) and was significantly lower in fimasartan 10 mg/kg group ($26.26 \pm 7.62\%$, p for difference between control group = 0.011).



PET and TTC stain results

Conclusions: PET imaging using a ^{18}F -labeled mitochondrial voltage sensor, [^{18}F]FPTP, is useful in evaluation of myocardial blood flow, and treatment with fimasartan decreases infarction size in animal MI model.

P3711 Prognostic value of ultra-low dose thallium myocardial perfusion imaging using CZT camera

V. Kincil¹, M. Kaminek², J. Vasina³, R. Panovsky¹, J. Machal⁴. ¹St. Anne's University Hospital, Department of Cardiovascular Diseases and ICRC, Brno, Czech Republic; ²University Hospital Olomouc, Department of Nuclear Medicine, Olomouc, Czech Republic; ³International Clinical Research Center, Nuclear Cardiology, Brno, Czech Republic; ⁴Masaryk University, Medical Faculty, Department of Pathophysiology, Brno, Czech Republic

Aim: To assess prognostic value of ultra-low dose thallium SPECT imaging

Patients and methods: Three hundred and sixty-six patients (245 men) underwent ultra-low dose stress-redistribution imaging on CZT SPECT camera GE Discovery NM 530c. The stress test was performed by bicycle ergometry or regadenosone injection and 0.5 MBq ^{201}Tl chloride per kilogram of body weight was administered. The stress images were acquired immediately and redistribution images after 3 hours. Ischaemia was assessed using 17 segment model of left ventricle and summed stress, rest and difference scores were evaluated. Follow-up of patients was focused on combined end-point (death, myocardial infarction, unstable angina, revascularization and hospitalization for heart failure). It was performed from hospital database, mean period 23 months. Patients with revascularization within one month after SPECT were excluded as revascularization for diagnosis.

Results: There were found 72 patients with ischaemia on SPECT, 294 without ischaemia. In patients with ischaemia there were 20 patients with cardiac events, and 22 with cardiac events in patients without ischaemia (HR 4,15, 95% CI 2,30–7,51, $p<0.0001$).

Results: Ultra-low dose thallium perfusion imaging using CZT camera provides very good prognostic results in assessment of myocardial ischaemia.

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P3712 18F-flouride PET MR in valvular and coronary heart disease; a pilot investigational study

J. Andrews, A. Moss, M. Doris, T. Pawade, P. Adamson, G. Macnaught, C. Lucatelli, D.E. Newby, M.R. Dweck. University of Edinburgh, Cardiology, Edinburgh, United Kingdom

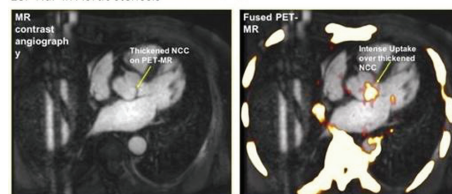
Background and introduction: Recently, hybrid PET-CT imaging has shown promise in the identification of high-risk coronary atherosclerosis and in the prediction of aortic stenosis progression. The development of PET-MR imaging platforms has provided opportunity to combine the assessment of disease activity (PET) with detailed anatomical and functional assessments of the myocardium with reduced radiation exposure. While this has already shown promise in the assessment of myocardial disease, the value of PET-MR imaging in coronary atherosclerosis and aortic stenosis remains uncertain

Purpose: We aimed to investigate aortic valve ^{18}F -NaF PET activity in subjects with aortic stenosis (AS) compared to those without. We also investigated ^{18}F -NaF uptake in culprit arteries in patients with recent myocardial infarction (MI). Our patient population was split into two cohorts. Cohort 1 consisted of patients with mild or moderate aortic stenosis ($n=10$). Cohort 2 consisted of patients with stable coronary disease ($n=2$) and those with MI and percutaneous coronary intervention within the previous year ($n=13$).

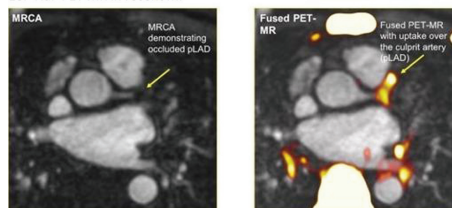
Methods: 25 patients underwent PET MR scanning approximately 90 minutes after injection of 125MBq (Cohort 1) or 250MBq (Cohort 2) ^{18}F -NaF. PET data was acquired in list mode for 50 minutes with a standard Dixon attenuation correction technique. Contrast-enhanced MR coronary angiography was performed following infusion of Gadolinium. PET activity was quantified in the aortic valve and coronaries by calculating standardised uptake values (SUV) and tissue to background ratios (TBR) on fused PET-MR images. Culprit arteries were identified by experienced operators during preceding invasive coronary angiography.

Results: 22 of 25 patients completed the protocol. Patients with aortic stenosis had higher aortic valve SUVmax and TBRmax (Valve SUV max/left atrial SUV mean) than those without aortic stenosis (SUVmax 1.89 ± 0.60 vs 1.15 ± 0.38 , $p=0.001$ and TBRmax 2.87 ± 0.98 vs 1.77 ± 0.43 , $p=0.001$). 13/13 (100%) patients with MI had focal ^{18}F -NaF uptake in the culprit vessel with an SUV max of 1.05 ± 0.26 vs 0.74 ± 0.13 for the proximal referent vessel ($p=0.002$). Culprit mean TBR max (culprit SUV max/left atrium SUV mean) was also greater than proximal referent vessel at 1.64 ± 0.47 vs 1.16 ± 0.26 ($p=0.004$).

^{18}F -NaF in Aortic stenosis



^{18}F -NaF PET MR in recent MI



^{18}F -NaF in coronary and AV disease

Conclusion(s): Similar to previous ^{18}F -NaF PET CT studies, ^{18}F -NaF PET-MR uptake is significantly greater in those with confirmed AS than those without. ^{18}F -NaF uptake also accurately identifies culprit arteries in those with recent MI. The results share similarities with recently published valvular and coronary ^{18}F -NaF PET-CT studies and thus promote further research into the utility of cardiovascular PET-MR as a complementary hybrid imaging technique.

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P3713 Myocardial perfusion imaging in liver transplantation candidates

F. Cordeiro¹, H. Martins², M.J. Alegre², A. Albuquerque², G. Costa², M.J. Ferreira³. ¹Hospital Center of Tras-os-Montes and Alto Douro, Cardiology, Vila Real, ²University Hospitals of Coimbra, Nuclear Medicine, Coimbra, ³Faculty of Medicine of the University of Coimbra, Coimbra, Portugal

Background: Patients undergoing liver transplantation (LT) are at high risk of cardiac events, thus careful preoperative cardiac risk assessment is imperative. However, data regarding the role of non invasive stress testing in LT candidates are scarce. We sought to assess the results and prognostic implications of myocardial perfusion imaging (MPI) with single-photon emission computed tomographic (SPECT) imaging in LT candidates.

Methods: We studied LT candidates who underwent SPECT technetium-99m