THE IMPACT OF EXERCISE AND DIET INTERVENTION ON LEFT ATRIAL FUNCTION IN TYPE 2 DIABETES: RESULTS FROM A RANDOMISED STUDY

Introduction The effects of low-energy diet or exercise on cardiovascular function in younger adults with type-2 diabetes (DIASTOLIC) study showed a significant improvement in left ventricle peak early diastolic strain rate in response to a 12-week programme of aerobic exercise in patients with type-2 diabetes (T2D). The impact of exercise and a low-calorie meal replacement plan (MRP) on left atrial (LA) function in T2D has not yet been explored. We investigated this association and to determine which is the primary pathology. It is likely that the interplay between myocardial fibrosis and CMD contributes to the significant cardiac mortality seen in ESRD.

Conflict of Interest None to declare

1. Introduction
2. Methods
3. Results
4. Conclusion

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events. 18F-NaF PET-CT holds promise as a non-invasive marker of disease severity and future risk in patients with acute aortic syndrome.

Conflict of Interest None

162 MULTI-MODALITY IMAGING IN SURVIVORS OF COVID-19

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Background Widespread abnormalities of the myocardium have been reported in patients with COVID-19. However, these patients often have substantial co-morbidities and it is essential to understand whether cardiac abnormalities represent pre-existing disease or are the consequence of COVID-19.

Objective To determine the contribution and cardiac impact of co-morbidities in patients who have recovered from COVID-19.

Methods In a prospective observational study, adult patients hospitalized with confirmed COVID-19 were recruited from the Edinburgh Heart Centre between May and November 2020 and compared to healthy and co-morbidity-matched volunteers. Patients underwent gadolinium and manganese-enhanced magnetic resonance imaging and coronary computed tomography angiography.

Results Twenty-three patients (54±11 years, 20 male) who recovered from COVID-19 were recruited. Half (n=11, 48%) required admission to the intensive care unit and a third (n=7, 31%) received non-invasive or invasive ventilation. Patients had a high prevalence of known cardiovascular disease (n=18, 78%), associated risk factors (n=11, 45%) and coronary artery disease (n=8, 35%). Compared with younger healthy volunteers (n=10), myocardial native T1 values (1202±25 versus 1162±27 ms, \( P=0.008 \)) and extracellular volume fraction (31.9±1.7 versus 29.8±0.5 %, \( P=0.001 \)) were higher with no differences in manganese uptake. Compared to co-morbidity-matched volunteers (n=20), there were no differences in native T1 values (1202±25 versus 1196±39 ms, \( P=0.61 \)), extracellular volume fraction (31.9±1.7 versus 31.0±0.5 %, \( P=0.11 \)), presence of late gadolinium enhancement or manganese uptake. These findings remained irrespective of COVID-19 disease severity, presence of concomitant myocardial injury or coronary artery disease.

Conclusions Patients who have recovered following hospitalization with COVID-19 have no evidence of a major excess in myocardial injury or dysfunction compared to co-morbidity-matched volunteers. The presence of co-morbidities likely explains many of the previously reported myocardial abnormalities.

Conflict of Interest None

163 FIRST IN VIVO PRETARGATED PET IMAGING OF ATHEROSCLEROSIS WITH ANTIBODIES AGAINST FORMS OF MODIFIED LIPOPROTEINS

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Atherosclerosis is a cardiovascular disease initiated by the deposition of Low Density Proteins (LDL) within the intima and