more commonly observed in individuals who died during exertion (56% compared with 34% in the group who died at rest, p = 0.08). Younger individuals between 10–15 years of age died mostly during exercise (80%), in other age groups death occurred mainly at rest (33% in age group 16–20 years, 30% in age group 21–25 years, 33% in age group 26–30 years) (Figure 1B).

Conclusion We observed a high age-related variability in terms of circumstances of death. In the context of HCM, our findings suggest that individuals aged 10–15 years are the most vulnerable in terms of exercise-related-SCD. This exemplifies the importance of preventative cardiac screening in young individuals who might be harbouring quiescent cardiac conditions associated with young SCD.

Conflict of Interest None

13 THE LONG-TERM EFFECTS OF ADIPOSE DEPOT CHANGE FOLLOWING BARIATRIC SURGERY ON CARDIAC GEOMETRY

Introduction Total body adipose volume is associated with left ventricular (LV) dilatation (due to increased intravascular volume and cardiac output) while visceral adipose tissue (VAT) is associated with smaller LV cavity size and concentric remodeling (because of insulin resistance). We therefore hypothesised that changes in VAT and total body weight during weight loss would have a differential impact on cardiac geometry. Furthermore, changes in epicardial adipose tissue (EAT), may have an additional mechanical effect by reducing pericardial restraint. We therefore sought to investigate long term changes in VAT, total weight and EAT following bariatric surgery and relate them to cardiac geometry.

Methods Thirty-eight patients underwent cardiac magnetic resonance (CMR) imaging before and after bariatric surgery, including 20 who underwent short-term (median 209 days), 28 medium-term (median 428 days) and 11 long-term (median 1030 days) imaging follow up. Cardiac volumes (left atrial (LA), LV end-diastolic volume (LVEDV) and stroke volume (LVSV)) were assessed using cardiac MRI. VAT was assessed at baseline by 1030 days. We hypothesise that the early drop in LA and LA cavity size is a response to reduced volume from body mass reduction. In contrast between 428 and 1030 days LVEDV remained the same size, and was similar to preoperative size (p = 0.92). LVSV followed a similar pattern being reduced at 209 days (by 10%, p = 0.002), then increasing after 428 days to become similar to pre-weight loss at 1030 days (p = 0.68).

Conclusions Cardiac volumes show a biphasic response to weight loss, initially becoming smaller and then returning to baseline by 1030 days. We hypothesise that the early drop in LA and LV cavity size is a response to reduced volume from body mass reduction. In contrast, we propose that the increase in LA and LVEDV that follows results from the longer term effects of reducing VAT, and increased space within the pericardium resulting from EAT loss allowing expansion to occur.

Conflict of Interest None

14 IMPACT OF EPILEPSY OR SEIZURES ON OUTCOMES FOLLOWING TAKOTSUBO CARDIOMYOPATHY

Introduction Takotsubo cardiomyopathy (TC) is often preceded by emotional or physical stress. Literature is conflicted on the effects of reducing VAT, and increased space within the pericardium resulting from EAT loss allowing expansion to occur.

Conflict of Interest None

1Raheel Ahmed, 2Hiroaki Sawatari, 3Syed Emir Irfan Wafa, 4Deepak Padmanabhan, 5Saurabh Deshpande, 6Mohammed Khanji, 7Virend Somers, 8Anwar Chahal. 1Northumbria Healthcare NHS Foundation Trust, Northumbria Way, Newcastle upon Tyne, TWR NE23 6NZ, United Kingdom; 2Hiroshima University Graduate School of Biomedical and Health Sciences; 3Northampton General Hospital; 4Sir Jayadeva Institute of Cardiovascular Sciences and Research; 5Fortis Healthcare; 6Queen Mary University of London; 7Mayo Clinic, USA