p=0.003) and regional parameters (data for 12 segments; vs 10.8±4.4 vs 9.9±4.4 cm/s, p<0.0001; S -15.7±4.7 vs -14.2±4.4, p=0.03; SR -2.2±0.5 vs -2.0±0.5/s, p<0.0001). The improvement was greater in those regions subtended by a coronary artery with >50% stenosis than in those supplied by a non-obstructed artery. At 30 min recovery, ischaemic LV dysfunction did not occur after sitagliptin (LVEF 55.6±3.5 vs 49.7±2.6%, p=0.0001; MASV 5.55±1.2 vs 5.20±1.0 cm/s, p=0.003).

Conclusion In patients with CAD and T2DM receiving OHT, DPP-4 inhibition by sitagliptin improves both global and regional myocardial performance during demand ischaemia (with greater benefit seen in ischaemic vs non-ischaemic segments), and mitigates post-ischaemic stunning.

136 INCREASE IN LEFT VENTRICULAR MASS IN TYPE 2 DIABETES IS DEPENDENT ON DURATION OF DIABETES

doi:10.1136/heartjnl-2012-301877b.136

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Background Adverse consequences of type 2 diabetes mellitus (T2DM) include an increase in left ventricular mass (LVM). Whether the underlying mechanisms of this association are due to the hyperglycaemic state per se, or to other risk factors is unclear. We explored the association between diabetes duration, an index of the chronicity of the hyperglycaemic state, with LVM.

Methods The Medical Research Council National Survey of Health and Development is a birth cohort study following men and women born in Britain in 1 week in March 1946. When study members were 60–64 years of age, 1700 underwent echocardiography and LVM indexed to body-surface-area (LVMi) was measured. The relationship between repeated measures of SBP and antihypertensive treatment (measured at 4 time points: ages 60–64 (current), 55, 43 and 36) and LVMi at 60–64 years was examined using sex-adjusted multiple regression models. Then, multilevel models of SBP were used to estimate person-specific intercepts (SBP at age 36) and slopes (rate of change in SBP between 36 and 53 years). The intercepts and slopes were then included in sex-adjusted linear regression models with LVMi as the outcome.

Results Individuals on treatment for hypertension, from age 43 years onwards, had higher mean LVMi than those who were not on treatment, irrespective of level of SBP at the same age. LVMi was 12.5 g/cm² (95% CI 9.2 to 15.4; p<0.001) higher for those currently on treatment, 10.0 g/cm² higher (95% CI 5.5 to 14.1; p<0.001) for those on treatment at age 53, and 15.1 g/cm² higher (95% CI 5.8 to 24.3; p=0.001) for treatment at age 43. In associated analyses, the effect of mid-life rate of change in SBP (from 36 to 53 years) on LVMi at age 60–64 years was 10 times greater than the effect of more recent rate of change in SBP (from 53 years to current).

Conclusions Our research suggests being on antihypertensive treatment may not normalise LVMi due to irreversible cardiac damage occurring in mid-life in poorly controlled hypertensives. Early identification and effective treatment of individuals with rapidly increasing SBP in mid-life may be key to preventing such damage. A review of current guidelines on monitoring and screening of blood pressure may thus be required.

138 NON-ANGINAL CHEST PAIN: NOT AS BENIGN AS WE WOULD LIKE TO BELIEVE!

doi:10.1136/heartjnl-2012-301877b.138

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Background In the Quick Reference Guide of the clinical guidance 95 (CG95) NICE recommends that chest pain (CP) diagnosed as non-anginal (NA) should not be investigated for stable angina routinely. In the Full Guidance, it qualifies this statement suggesting that stable angina should be excluded in patients with NACP unless clinical suspicion is raised based on other aspects of the history and risk factors. In the chest pain management algorithm, however, it excludes patients with NACP in whom stable angina is suspected based on history and risk factors. This study was undertaken to assess the outcome of patients attending rapid access chest pain clinic (RACPC) and diagnosed with NACP who are likely to be discharged without further investigation as suggested by CG95.

Method and Results 1042 consecutive RACPC referrals between November 2009 and April 2011 were reviewed. Demographics, CG95 defined risk factors, CP characteristics, history of confirmed coronary artery disease (CAD), results of the exercise ECG test, management plan and outcomes (composite end point of all cause