accounting for age, blood pressure, sex, BMI, smoking status and cholesterol no significant association persisted (B=–0.001 (95%CI –0.004–0.002), p=0.62).

Conclusion Systemic arteriosclerosis and atherosclerosis are separate entities with each determined by different risk factors. Future efforts in cardiovascular risk prevention should seek to address both of these pathophysiological entities.

16 PULMONARY ARTERIAL STIFFNESS IN COPD: PULMONARY BIOMARKER OR ANOTHER MEASURE OF SYSTEMIC ARTERIOSCLEROSIS?

[1]Jonathan R Weir-McCall, [1]Patrick SK Liu-Shiu-Cheong, [1]Allan D Struthers, [2]Brian J Lipworth, [1]JGraeme Houston. *[1]Division of Molecular and Clinical Medicine, University of Dundee, Dundee, UK; [2]Scottish Centre for Respiratory Research, Medical Research Institute, University of Dundee, Dundee, UK*

10.1136/heartjnl-2017-311677.16

Introduction Both pulmonary and systemic arterial stiffening have been described in COPD. It is not currently clear whether these reflect separate disease processes within the pulmonary and systemic circulation or whether they are both due to a global arteriosclerosis. The aim of the current study is to assess arterial stiffness using pulse wave velocity (PWV) within these two arterial beds to determine whether they are separate or linked processes.

Methods 58 participants with COPD underwent pulmonary function tests, six-minute walk test, and cardiac MRI (CMR), while 21 age and sex matched non-smoking healthy volunteers underwent CMR. CMR was used to quantify right and left ventricular mass and volumes, with phase contrast imaging of the main pulmonary artery and ascending and abdominal aortic aorta performed in order to calculate pulmonary (pPWV) and systemic (sPWV) arterial stiffness using pulse wave velocity (PWV).

Results Compared with controls, pPWV (COPD: 2.63±1.3 ms^{-1} vs. HC: 1.76±0.7ms^{-1}, p=0.006) was significantly elevated with a trend towards higher sPWV (COPD: 8.67 ±2.7ms^{-1} vs. HC: 7.35±2.1ms^{-1}, p=0.06). pPWV showed a trend towards an association with smoking pack years (rho=0.22, p=0.053), while sPWV showed a significant association with age (rho=0.47, p<0.001), systolic blood pressure (rho=0.32, p=0.02), and percentage predicted DLCO/VA (rho=0.43, p=0.001). There was no significant association between sPWV and pPWV (rho=–0.004, p=0.97).

Conclusion Pulmonary and systemic arterial stiffening were associated with different risk factors and are independent processes in COPD. Further work is warranted to determine if both can be targeted by similar pharmacological therapy or whether different strategies are required for both.

17 CORONARY ANGIOGRAPHY IN A DISTRICT GENERAL HOSPITAL

[1]Matthew GL Williams, [2]Danial Fox, [1]David H MacIver, [1]Mark Dayer, [2]Katharine Augustine, [2]Paul Burn, [1]OE Gosling. *[1]Department of Cardiology, Taunton and Somerset Hospital, Musgrove Park, Taunton, UK; [2]Department of Radiology, Taunton and Somerset Hospital, Musgrove Park, Taunton, UK*

10.1136/heartjnl-2017-311677.17

Introduction CTCA is now an established diagnostic tool in the evaluation of chest pain, and with the recently up-dated NICE CG95 guidelines its use is likely to increase nationally.[1] We aimed to assess the demographics of our local patient cohort, protocol use, radiation dose and the accuracy and outcomes from our CT service.

Methods Demographic and outcome data was collected for a 17 month period from Jul 2015–Nov 2016. The CTCA result was compared with the invasive angiogram in patients who had both investigations.

Results 689 scans were performed with 95% for rule out of coronary artery disease. 8% of the scan protocols used were calcium scores only, 25% were prospectively ECG triggered spiral acquisition (FLASH), 60% prospective, 4% retrospective and 3% required more than 2 contrast scans. Mean BMI was 29±11 Kgm^{-2}, median DLP 137 mGy*cm (IQR 87–230 mGy*cm), mean acquisition heart rate 61±21 bpm and median IV metoprolol dosage used was 8mg (IQR 0–20 mg). 98% of scans were diagnostic. 11% were referred on for angiography, 88% were recommended medical therapy and 1% were referred for MRI. There was 80% agreement with coronary angiography with 65% proceeding to intervention. 0% of patients who had a negative CTCA required subsequent intervention (before 15/11/16).

Conclusion Our real-world data demonstrates that CTCA in a district general hospital is an accurate and effective way to rationalise investigations, particularly in the management of coronary artery disease.

18 DOWNSTREAM INVESTIGATION OF NON-CARDIAC INCIDENTAL FINDINGS IN PATIENTS UNDERGOING CT CORONARY ANGIOGRAPHY: FINDINGS FROM THE MULTI-CENTRE RANDOMISED CONTROLLED SCOT-HEART TRIAL

[1]Michelle C Williams, [1]Amanda Hunter, [1]Anoop Shah, [2]John Dreisbach, [3]Jonathan Weir McCaull, [4]Mark Macmillan, [4]Rachel Kirkbride, [4]Andrew Baird, [5]Fiona Hawke, [6]Saeed Mirsadraee, [6]Edwin van Beek, [1]David E Newby, [2]Giles Roditi. *[1]University of Edinburgh/British Heart Foundation Centre for Cardiovascular Science, Edinburgh, UK; [2]Department of Radiology, Glasgow Royal Infirmary, Glasgow, UK; [3]Division of Molecular and Clinical Medicine, University of Dundee, Dundee, UK; [4]Department of Radiology, Royal Infirmary of Edinburgh, Edinburgh, UK; [5]Department of Radiology, Borders General Hospital, Melrose, UK; [6]Clinical Research Imaging Centre, University of Edinburgh, Edinburgh, UK*

10.1136/heartjnl-2017-311677.18

Introduction Non-cardiac findings can be identified on computed tomography coronary angiography (CTCA). We assess the follow-up of non-cardiac incidental findings, and impact of changes in lung nodule follow-up guidelines.

Methods This sub-study of the SCOT-HEART randomised controlled trial assessed images and health records of patients who underwent CTCA. Non-cardiac incidental findings were classified as the cause of symptoms (yes, probable, unlikely, no) and significant findings were those requiring further investigation, follow-up or treatment. Recommendations for lung nodule follow-up were provided as per 2005 Fleischner guidelines. We assessed potential changes using the 2015 British Thoracic Society (BTS) guidelines and 2017 Fleischner guidelines.

Results CTCA was performed in 1778 patients and non-cardiac findings were identified in 677 (38%). 173 (10%) were

defined as significant and 22 (1.2%) were the cause of symptoms. Lung nodules, masses or granuloma were identified in 200 (11%). Follow-up imaging for lung nodules was recommended for 126 patients (7%) but performed in 85 (4.7%). Malignancy was subsequently diagnosed in 7 (0.4%). Using 2016 BTS guidelines would mean 68 fewer scans in 47 patients and the 2017 Fleischner guidelines would mean 78 fewer scan in 53 patients. None of these developed malignancy. Applying the 2016 BTS guidelines would mean a 50% cost saving and the 2017 Fleischner guidelines would mean a 57% cost saving.

Conclusion Significant non-cardiac findings are uncommon, but may represent an important treatable cause of chest pain. New guidelines for lung nodule follow-up will reduce the number CT scans required, without the risk of missing malignancy.