Abstract 16 Figure 1  MAPSE measurements were taken in the four-chamber cine.

17 ROUTINE CARDIAC MRI SCREENING REVEALS REDUCED PREVALENCE OF STRUCTURAL CARDIOVASCULAR ABNORMALITIES IN PATIENTS WITH TURNER SYNDROME

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10.1136/heartjnl-2015-307845.17

Background Turner syndrome has been associated with significantly reduced rates of cardiovascular anomalies. Current guidelines for the management of this condition suggest evaluation of the aorta via cardiac magnetic resonance (CMR) imaging or echocardiography every 5 to 10 years to evaluate each patient via cardiac magnetic resonance (CMR) imaging or echocardiogram imaging, in addition to review of records relating to previous operative intervention. Risk stratification tools are therefore required to optimise use of resources in patients with Turner syndrome requiring routine screening for structural cardiovascular abnormalities.

Purpose To determine whether segmental circumferential strain (Ecc), myocardial salvage (MSI), microvascular obstruction (MVO) and intramyocardial haemorrhage (IMH) predict segmental functional recovery and offer incremental predictive value to segmental extent of enhancement (SEE) acutely post-PPCI.

Methods 1.5T CMR was performed in 164 patients (2624 segments) at 48 hr and 9 month post-STEMI. LV function was assessed on wall-motion scoring on SSFP cines. Segmental dysfunction was defined as WMS ≥2, improvement was WMS decrease of ≥1 and normalisation where WMS returned to 1 at follow-up. SEE and MVO were assessed on LGE using full-width half-maximum thresholding. Oedema and IMH were assessed on T2w imaging using Otsu’s Automated Method. Ecc was Feature Tracking-derived. MSI was the proportion of non-infarcted segmental oedema. Accuracy of baseline SEE, segmental Ecc, MSI, MVO and IMH in predicting improvement and normalisation in dysfunctional segments was assessed with Receiver Operator Curves.

Results 32% of segments were dysfunctional at baseline and 19% at follow-up. With increasing SEE, segmental function worsened and proportion of dysfunctional segments recovering decreased. However 33% of SEE >75% segments improved (Figure 1a). SEE was a strong predictor of improvement (AUC 0.708) and normalisation (AUC 0.807). SEE was a stronger predictor than MVO, IMH and Ecc (p < 0.01 for all), MVO, IMH and Ecc were weak predictors. Combining SEE with MVO,