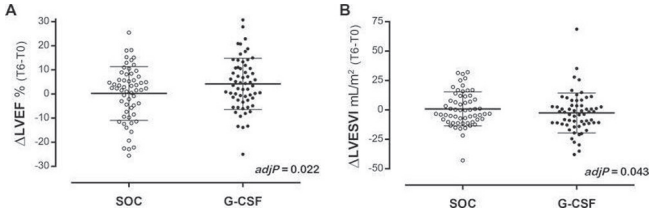
length × 100. Furthermore, we measured % uncovered strut, number of uncovered strut divided by total number of strut × 100.
Results: Finally, 83 patients (87 stents) were enrolled in MECHANISM-elective trial and 90 patients (90 stents) in MECHANISM-AMI trial. The maximum area and % length of Th and IRP post index PCI were significantly greater in MECHANISM-AMI patients compared with MECHANISM-Elective, but the quantitative measures of SP were not different. Those significant difference has been unchanged even 12 months after PCI. % uncovered strut was more frequent 12 months after PCI in MECHANISM-AMI (table).
Conclusion: The MECHANISM registry demonstrated that vessel healing at the stented lesion in STEMI patients treated with 2nd DES were delayed compared with SAP.

P6048
G-CSF for STEMI: results of the STEM-AMI OUTCOME CMR Sub-study

G. Pompilio[1], G. Pontone[1], G.I. Colombo[1], B. Bassetti[1], S. Righetti[2], L. Squadroni[3], J. Campodonico[1], L. Monti[4], L. Lenatti[5], C. Facchini[6], L. Mircoli[7], G. Esposito[8], L. Cacciavillani[9], S. Pidello[10], F. Achilli[2]. *[1]Cardiology Center Monzino IRCCS, Milan, Italy; [2]San Gerardo Hospital, Monza, Italy; [3]San Carlo Hospital, Milan, Italy; [4]Istituto Clinico Humanitas, Milan, Italy; [5]Alessandro Manzoni Hospital, Lecco, Italy; [6]Bassini Hospital, Cinisello Balsamo, Italy; [7]IRCCS Fondazione Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy; [8]Federico II University Hospital, Naples, Italy; [9]University Hospital of Padova, Padua, Italy; [10]Hospital 'Città della Salute e della Scienza di Torino', Turin, Italy*

Background: In the previous STEM-AMI Phase II trial, we reported that early administration of G-CSF, additional to standard of care (SOC), in patients with anterior STEMI and ejection fraction (EF) ≤45% after successful PCI, significantly attenuated left ventricular (LV) adverse remodeling in terms of absolute end-diastolic volume (EDV) up to 3 years, as assessed by cardiac MR (CMR).
Purpose: The STEM-AMI OUTCOME CMR Sub-study was adequately powered to conclusively evaluate at CMR the effects of early subcutaneous administration of G-CSF on LV remodeling and EF in a STEMI population with LV dysfunction (EF ≤45%) after PCI.
Methods: In the context of the Italian multicenter STEM-AMI OUTCOME Phase III trial (NCT01969890), the CMR Sub-study has enrolled, from 10 centers during a 3 year period, 120 consecutive patients with large STEMI (symptoms to balloon time >2 and <24 hours and within 24 hours from successful PCI). Sixty-one patients were randomized to SOC+G-CSF, 59 patients to SOC. All patients underwent CMR 7 days (T0) and 6 months (T6) after STEMI. CMR imaging was analyzed by blinded experts.
Results: The two groups were similar for clinical characteristics, cardiovascular risk factors and admission treatment. G-CSF group showed a trend for a larger myocardial infarction than in the SOC group (CK-MB peak, mean ± SEM, 254±25 vs. 208±23 mg/ml in G-CSF and SOC, respectively, P=0.10) and longer symptom-to-balloon time (348±33 vs. 270±28 min, P=0.08). Baseline echocardiographic EF at enrollment was not significantly different between the two groups (38.5%±0.7 vs. 38.8%±0.6, P=0.72), as well as baseline CMR-derived EF (44.7%±1.3 vs. 47.1%±1.2, P=0.16).
At 6 months, only the G-CSF group showed a significant increase in CMR-EF (T6-T0 4.2%±1.4, P=0.003), whereas no changes were observed in the SOC group (0.2%±1.5, P=0.88). Notably, the difference between the changes from T0 to T6 in G-CSF vs. SOC was significant when adjusted for peak myocardial enzymes and symptom-to-balloon time (+4.0%±2.0, adjP=0.022; Figure A). This was paralleled by a significant reduction in indexed end-systolic volume (T6-T0 -4.2±4.1 vs. +1.9±3.7 mL/m^2 in G-CSF and SOC, respectively; difference between the changes 6.1±2.1 mL/m^2, adjP=0.043; Figure B).



Conclusion(s): In an adequately powered study, we confirm that G-CSF exerted a beneficial effect in terms of global systolic function and adverse remodeling, when administered in addition to SOC in patients with LV dysfunction after large STEMI. These results may pave the way for a new cardioprotective treatment in STEMI.
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P6049
Regional differences in process of care and clinical outcome among patients with ST-elevation myocardial infarction in Canada and the United Kingdom

K. Bainey, D. Tran, R. Potluri, P. Carter, R.C. Welsh, P. Kaul. *University of Alberta, Canadian VIGOUR Centre, Edmonton, Canada*

Background/Introduction: Inter-country comparisons can serve as natural experiments to assess the effectiveness of alternative systems of care for homogenous patient populations.
Purpose: We evaluated differences in clinical characteristics, reperfusion strategies employed, and clinical outcomes of patients hospitalized with an ST-elevation myocardial infarction (STEMI) in Canada and the United Kingdom (UK).
Methods: We compared 6,547 Albertans and 1,345 Northern England patients hospitalized for STEMI from 2009 to 2013 enrolled in the Alberta Contemporary Acute Coronary Syndrome Patients Invasive Treatment Strategies (COAPT) and Algorithm for Comorbidities, Associations, Length of stay and Mortality (ACALM) registries, respectively.
Results: As seen in the Table, Alberta patients were similar in age, but had fewer females than patients in the UK. Rates of hypertension and diabetes were higher in Alberta, but rates of heart failure and atrial fibrillation were higher in the UK cohort. A pharmacoinvasive (PI) approach (fibrinolysis + PCI) was used more frequently in Alberta while the majority of UK patients received primary percutaneous coronary intervention (PPCI). Almost 30% of patients received no reperfusion in Alberta. Median length of stay (LOS) was shorter in the UK. In a multivariable logistic regression model, there was no difference in 30-day mortality between the two regions (adjusted OR (aOR) 0.86, 95% CI 0.64–1.16, p=0.32). Shorter LOS was associated with reduced 30-day mortality (OR 0.89, 95% CI 0.87–0.92, p<0.01). There was a trend towards PI strategy being associated with lower risk (aOR 0.68, 95% CI 0.45–1.04, p=0.08), while no reperfusion was associated with a higher risk of 30-day mortality (aOR 2.16, 95% CI 1.69–2.76, p<0.001) compared to PPCI.

	Alberta, Canada (n=6,547) (3 catheterization sites serving 4.1 M residents)	Northern England, UK (n=1,345) (5 catheterization sites serving 1.4 M residents)	p-value
Selected Baseline Characteristics			
Age, years (median,IQR)	59 (52-68)	59 (51-69)	0.75
Female, n (%)	22.4	25.4	0.02
Hypertension (%)	49	44.8	0.01
Diabetes (%)	19.1	16.6	0.03
Heart failure (%)	7.7	19.6	<0.001
Atrial fibrillation (%)	6.2	8.6	0.001
Charlson score (mean, SD)	1.62 (1.02)	1.69 (1.16)	0.05
Reperfusion Strategy, n (%)			
Primary percutaneous coronary intervention (PPCI)	2,991 (45.7)	1,071 (79.6)	<0.001
Fibrinolysis + PCI (pharmacoinvasive approach)	1,257 (19.2)	61 (4.5)	
Fibrinolysis only	454 (6.9)	4 (0.3)	
No reperfusion	1,845 (28.2)	209 (15.5)	
Clinical Outcome			
Length of stay, days (median, IQR)	5 (4-7)	3 (2-5)	<0.001
30-day mortality (%)	4.7	5.8	0.08

Table

Conclusions: Clear inter-country differences in process of care exist in treatment of STEMI; however, they do not appear to result in significant differences in survival. Further efforts in both regions (particularly in Alberta) are required to improve outcomes in patients without reperfusion. Finally, investigation into costs of reperfusion strategies for STEMI in the two health care systems would be of interest given similar survival.

CARDIAC CT IN PATIENTS WITH VALVULAR HEART DISEASE

P6050
CT based assessment of left ventricular reverse remodeling after transcatheter aortic valve implantation

B. Szilveszter[1], D. Oren[1], M. Kolossvary[1], J. Karady[1], B. Vattay[1], Á Jermendy[1], A. Bartykowszki[1], A. Panajotu[1], F. Suhai[1], A. Nagy[2], A. Apor[2], B. Merkely[2], P. Maurovich-Horvat[1]. *[1]Semmelweis University Heart Center, Cardiac Imaging Dept. MTA-SE "Lendület" Cardiovascular Imaging Research Group, Budapest, Hungary; [2]Semmelweis University Heart Center, Budapest, Hungary*

Background: Severe aortic valve stenosis (AS) results in left sided ventricular (LV) hypertrophy and remodelling. Transcatheter aortic valve implantation (TAVI) has emerged as a safe and effective alternative to surgical aortic valve replacement for patients with severe, symptomatic AS and high surgical risk. Computed tomography angiography (CTA) is progressively being used for the planning and follow-up of TAVI.
Purpose: We aimed to evaluate predictors of left ventricular reverse remodeling after TAVI based on LV mass changes on CT imaging.
Methods: We included a total of eighty patients who underwent retrospectively