

site complications was not significantly different between both groups (pain 12% vs 6.3%,  $p=0.19$ ; paresthesias 6.7% vs 2.8%,  $p=0.28$ ; local hematoma 35% vs 65%,  $p=0.74$ ).

**Conclusions:** In a contemporary cohort of pts undergoing diagnostic transradial catheterizations the rate of RAO was low and not significantly different whether heparin was used or not. This proof of concept study highlights the need for inclusion of a no treatment/placebo arm in future heparin for RAO prevention trials.

#### P5546

ABSTRACT WITHDRAWN

#### P5547

##### Effect of transradial access for coronary angiography on vascular function of brachial arteries

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The effect of trans-radial coronary angiography on the endothelial function of the ipsilateral brachial artery was evaluated in 24 patients admitted for coronary angiography. Contralateral brachial artery served as control. Flow-mediated dilation (FMD) was assessed on both arms and nitrate-mediated dilation (NMD) on catheterized arm the day before and six hours after coronary angiography. FMD significantly decreased after coronary angiography on catheterized arm ( $5.7\pm 3.1\%$  to  $2.2\pm 1.8\%$ ;  $p=0.00009$ ) but not on contralateral arm ( $5.2\pm 3\%$  to  $4.1\pm 2.5\%$ ;  $p=0.25$ ). NMD also significantly decreased on catheterized arm ( $9.9\pm 4.9\%$  to  $5.4\pm 4\%$ ;  $p=0.0029$ ) after angiography. Alteration in FMD was not significantly correlated with the number of catheters used or with the duration of the procedure.

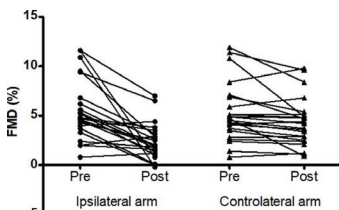


Figure 1

These results demonstrate a significant alteration in endothelial function of the ipsilateral brachial artery after transradial catheterization. The absence of change in contralateral FMD argues against a systemic origin and is compatible with a direct traumatic effect on the arterial wall. The associated alteration in NMD is compatible with an additional direct effect on vascular smooth muscle cells, although a change in basal vasomotor tone cannot be excluded.

#### P5548

##### Exercise-induced increase of serum cardiac troponin T levels in patients with suspected acute coronary syndrome

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**Background:** The detection of increased levels of troponin in the blood is the reference marker for the diagnosis of myocardial necrosis/infarction. However, several data suggest that troponin increase might also be consequent to myocardial ischemia, in the absence of necrosis. In this study, we aimed to assess whether exercise-induced myocardial ischemia may result in increase of serum troponin levels in patients admitted because of a suspect of unstable angina.

**Methods:** We enrolled 69 consecutive patients (age  $57\pm 11$ ; 47 men) admitted to the Emergency Room Department of our hospitals for chest pain suspect for an acute coronary syndrome (ACS) but showing normal high-sensitive serum cardiac troponin T (hs-TnT) values on two determinations, performed with an interval of 6 hours. All patients underwent a symptom/sign-limited Bruce treadmill exercise stress test (EST). EST was considered positive for myocardial ischemia when an ST-segment depression  $\geq 1$  mm was induced at the electrocardiogram (ECG). Blood samples were collected immediately before and 4 hours after peak EST. In patients undergoing coronary angiography, the presence of obstructive coronary artery disease (CAD), defined as a  $\geq 50\%$  stenosis in any epicardial vessel, was recorded.

**Results:** EST was positive in 14 patients (20.3%) and negative in 55 patients (79.7%). Coronary angiography was done in 20 patients (29%), showing obstructive CAD in 9 (45%) and no obstructive CAD in 11 (55%). In the whole population, hs-TnT was found to increase 4 hours after EST compared to baseline (from  $0.84\pm 0.65$  to  $1.17\pm 0.87$  ng/dL,  $p<0.001$ ). A similar significant increase of hs-TnT after EST ( $p<0.01$  for both) was found in patients with positive EST (from  $0.82\pm 0.48$  to  $1.20\pm 0.47$  ng/dL) and negative EST (from  $0.85\pm 0.68$  to  $1.17\pm 0.95$  ng/dL;  $p$  for change=0.72). Also a similar increase in hs-TnT after EST ( $p<0.01$  for both) was found in patients with (from  $0.93\pm 0.53$  to  $1.24\pm 0.55$  ng/dL) vs. those without (from  $0.70\pm 0.38$  to  $0.97\pm 0.44$  ng/dL) obstructive CAD at angiography ( $p$  for change=0.73). Overall, 15 patients (21.7%) achieved hs-TnT values 4 hours after EST above the threshold for the diagnosis of "myocardial infarction" ( $\geq 1.4$  ng/dL).

**Conclusion:** Our data show that hs-TnT increases significantly after EST in patients with suspected ACS with normal basal hs-Tn values. The increase was independent of ECG evidence of exercise-induced myocardial ischemia and the presence of obstructive CAD at angiography, suggesting that it is largely related to exercise in itself.

#### P5549

##### Different inflammatory profile in young and elderly STEMI patients undergoing primary percutaneous coronary intervention (PPCI): its influence on no-reflow

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**Background:** Coronary no-reflow phenomenon in ST-segment elevation myocardial infarction (STEMI) is associated with a poor clinical prognosis. Although its pathophysiology is not fully elucidated, a dysregulated systemic inflammatory response seems to play an important role. No studies, so far, have been focused on relationships between age-associated differences in acute inflammation markers and their influence on no-reflow in STEMI patients.

**Objectives:** To evaluate the acute-phase inflammatory profile in young and elderly STEMI patients undergoing primary percutaneous coronary intervention (PPCI), and to establish its possible role in predicting TIMI flow-grade.

**Methods:** We studied retrospectively 625 consecutive STEMI patients undergoing PPCI. Routinely blood measured laboratory parameters were collected at the moment of admission. The population was divided into two groups using a cut-off centered at 65 years (young patients,  $n=307$ , mean age=  $55\pm 8$ ; elderly patients,  $n=318$ , mean age= $76\pm 7$ ). A door-to-balloon (DTB) time was collected for each patient. No-reflow was defined as a Thrombolysis in Myocardial Infarction (TIMI) flow-grade  $< 3$ .

**Results:** Elderly patients had higher mean values of C-reactive protein ( $P=0.0003$ ), fibrinogen ( $P=0.005$ ), VES ( $P=0.0001$ ), brain natriuretic peptide (BNP) ( $P=0.0001$ ), leukocytes ( $P=0.004$ ) and neutrophil-to-lymphocyte (N/L) ratio ( $P=0.0001$ ). Lymphocyte count and albumin levels were higher in young patients ( $P=0.0001$ ). In elderly patients, the values of N/L ratio, as well as of leukocytes, neutrophils, VES and fibrinogen, were significantly associated with no-reflow. On the contrary, in young patients, the higher admission levels of BNP was the only laboratory data significantly associated with no-reflow.

**Conclusions:** These observations suggest a differential inflammatory pattern in young and elderly STEMI patients at the admission, and confirm the presence of a higher acute pro-inflammatory condition in elderly patients. Moreover, while in elderly patients the cellular and humoral aspects of acute inflammation seems influence the coronary no-reflow, the latter seems to be mainly dependent on the pre-procedural myocardial dysfunction in young patients.