Conclusion: Thrombopoiesis should be proposed systematically in case of STEMI to reduce the risk of no reflow particularly in the presence of clinical or angiographic predictive factors of this phenomenon.

Impact of the use of fractional flow reserve (FFR) on the coronary revascularization strategy: insights from a large French multicenter FFR Registry (R3F)

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Background: Recent data suggest that fractional flow reserve (FFR) is useful in guiding coronary revascularization. There is however currently no large report of the use of this technology in France, in particular its impact on the decision of coronary revascularization.

Methods: The R3F registry investigated the use of FFR in 20 French centers from October 2008 to June 2010. To investigate this issue the investigators defined prospectively their revascularization strategy “a priori” before performing the FFR. This was compared to the final strategy applied to the patient after performing the FFR. The results of the first 945 consecutive patients are presented.

Results: 75% of patients were males with a mean age of 65±10 years, 37% were diabetics and 19% had an acute ACS. Patients had non-significant (<50% stenosis) angiographic coronary artery disease (14%), significant (>50%) angiographic 1-vessel (37%), 2-vessel (30%) or 3-vessel disease (19%). The strategy defined “a-priori” by the investigators was medical therapy (52%), PCI (37%), and CABG (11%). After the results of FFR the final strategy was medical therapy in 58% and coronary revascularization in 42% (PCI in 31% and CABG in 11%). Interestingly in 45% of cases the strategy defined “a priori” was modified by the results of the FFR:
1) In 36% of the patients in which a medical therapy was planned “a priori” the strategy was modified for PCI (26%) or CABG (10%);
2) In 58% of the patients in which a PCI was considered “a priori” the strategy was modified for medical therapy (50%) or CABG (8%);
3) In 68% of the patients in which a CABG was considered “a priori” the strategy was modified for medical therapy (64%) or PCI (4%).

Conclusion: The present report, based on a large French multicenter registry, demonstrated that although FFR had little impact on the overall rate of revascularization, it modified the individual decision in almost 1 out of 2 patients. 009

Impact of early vs late microvascular obstruction on ventricular remodeling at 6 months assessed by 3-Tesla magnetic resonance imaging in acute myocardial infarction

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Background: Microvascular obstruction (MOV) at the acute phase of myocardial infarction (MI) is associated with greater myocardial damage, left ventricular (LV) impairment and higher mortality. We compared the impact of early and late microvascular obstruction (MOV) as assessed by 3-T cardiac magnetic resonance imaging (MRI) at the acute phase of MI on LV remodeling at 6 months.

Methods: We included 51 consecutive patients (pts) with no previous history of cardiovascular disease, and presenting for first MI with or without ST elevation. Infarct size and extent of no-reflow were evaluated by 3-T MRI during acute phase by early and late hyperenhancement imaging at 3 and 15 min after gadolinium injection. Extent of no-reflow at 3 minutes (early MVO) and 15 minutes (late MVO) was measured. Follow-up MRI was performed at 6 months. Systolic and diastolic LV volumes, as well as LV ejection fraction and infarct size were compared at baseline and 6 months.

Results: Incidence of early MVO was 56% vs 43% for late MVO. There was a significant difference in extent of no-reflow between early and late MVO (7.8±6% vs 5.4±4%, p<0.0001, early vs late respectively). There was also a significant difference in LV evolution at 6 months between pts with and without no-reflow (p<0.05). In pts who showed no-reflow at 3 minutes only, but not at 15 minutes, ventricular dilatation was observed at 6 month follow-up of a magnitude similar to that observed in pts with persistent no-reflow at 15 minutes.

Conclusion: Incidence of MVO is higher when assessed at 3 minutes, rather than at 15 minutes. In this context, systematic early MVO evaluation could help identify a larger group of pts at risk of unfavourable evolution, because when MVO is evaluated at 15 minutes, pts who had no-reflow at 3 minutes that subsequently resolved, go unidentified. The presence of MVO is associated with LV dilatation at 6 months follow-up, regardless of whether no-reflow was present at 3 minutes only, or persistent at 15 minutes.

Non invasive coronary flow reserve is a powerful independent predictor of in-hospital complications in Tako-Tsubo syndrome

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Several in-hospital complications (HC) could impair the clinical course of tako-tsubo syndrome (TTS).

Objective: to assess the clinical and echocardiographic predictors of HC in TTS.