

between qualifying ECG and coronary angiography for PPCI in STEMI patients. Not following the ESC guidelines was associated with a three-fold increase in hospital mortality. A similar trend was observed for lytic-treated patients. When meeting the ESC guidelines for PPCI seems unlikely, timely administration of fibrinolysis should be considered.

### 1387 In-hospital complications in relation with use and timing of prehospital antithrombotic medications in STEMI patients. The FAST-MI 2010 registry



P. Goldstein<sup>1</sup>, D. Carrie<sup>2</sup>, Y. Cottin<sup>3</sup>, S. Charpentier<sup>2</sup>, P. Motreff<sup>4</sup>, G. Leurent<sup>5</sup>, Y. Valy<sup>6</sup>, V. Probst<sup>7</sup>, T. Simon<sup>8</sup>, N. Danchin<sup>9</sup> on behalf of the FAST-MI 2010 investigators. <sup>1</sup>Hospital Regional University of Lille, Department of Emergency, Lille, France; <sup>2</sup>University Hospital of Toulouse-Rangueil Hospital, Dpt Cardiology A/Cardiovascular & Metabolic Pole, Toulouse, France; <sup>3</sup>University Hospital Center - Hospital of Bocage, Dijon, France; <sup>4</sup>University Hospital of Clermont-Ferrand, Department of Cardiology, Clermont-Ferrand, France; <sup>5</sup>University Hospital of Rennes - Hospital Pontchaillou, Department of Cardiology and Vascular Disease, Rennes, France; <sup>6</sup>Hospital of La Rochelle, Department of Cardiology, La Rochelle, France; <sup>7</sup>University Hospital of Nantes, Nantes, France; <sup>8</sup>AP-HP - Hospital Saint-Antoine, Faculty of Medicine Pierre & Marie Curie Paris 6, Paris, France; <sup>9</sup>AP-HP - European Hospital Georges Pompidou, Paris, France

**Background:** France has a highly developed MICU system with emergency physicians on board the ambulances (SAMU), who have the ability to administer recommended medications at a very early stage of AMI.

**Aim:** To assess in-hospital outcomes in patients transported by the SAMU, in relation to the pre-hospital administration of antithrombotic medications and time from symptom onset to first call.

**Methods:** FAST-MI 2010 is a nationwide French registry that included 4169 patients with AMI at the end of 2010 in 213 centres. Of those, 2364 had STEMI, of whom 1868 (79%) were transported by the SAMU and 1836 had the time from symptom onset to first call recorded (78%).

**Results:** Time from onset to first call was  $\leq 60$  minutes in 923 pts (50%), 1172 pts (64%) received an antiplatelet agent, with 1010 receiving dual oral antiplatelet therapy (DAPT, 55%) in the ambulance. In addition, 27% received enoxaparin and 29% received unfractionated heparin. Patients calling within 60 min of onset had significantly higher prescription rates of antithrombotic therapy: 71% vs 57%, 62% vs 48%, 30% vs 24% for any antiplatelet therapy, DAPT, and enoxaparin, respectively. Younger age, male sex, short time from onset to call, absence of diabetes and lower GRACE score were independent predictors of the use of pre-hospital antithrombotic medications. Fibrinolytic treatment was administered prehospital in 11% (15% when onset to call  $\leq 60$  min vs 7% when onset to call  $> 60$  min). When time from onset to call was  $\leq 60$  min, in-hospital mortality was lower with prehospital antithrombotic therapy: any antiplatelet 2.3% vs 5.9% ( $P=0.001$ ), DAPT 1.8% vs 6.0% ( $P<0.001$ ), any heparin 1.9 vs 5.7% ( $P=0.002$ ), prehospital lysis 2.9 vs 3.4% ( $P=NS$ ). In contrast, prehospital antithrombotic therapy was not associated with lower in-hospital mortality when time from symptom onset to call was  $> 60$  minutes: 2.7 vs 2.8%, 2.5 vs 3.0%, 2.4 vs 3.0%, 4.8 vs 2.6% respectively (all  $P = NS$ ).

**Conclusion:** The use of prehospital antithrombotic therapy remains suboptimal in patients managed by physician-staffed ambulances. In patients calling early after symptom onset, the use of prehospital antithrombotic therapy was associated with lower in-hospital death; in contrast, in patients calling beyond one hour of symptom onset, the association with hospital mortality was neutral.

### 1388 Comparative validation of three contemporary bleeding risk scores in acute coronary syndromes



E. Abu Assi, S. Raposeiras Roubin, P. Cabanas Grandio, R. Agra Bermejo, B. Alvarez Alvarez, C. Cambiero Gonzalez, S. Fernandez, M. Rodriguez Cordero, C. Pena Gil, J.R. Gonzalez-Juanatey. University Clinical Hospital of Santiago de Compostela, Santiago de Compostela, Spain

**Background:** Hemorrhagic complications are strongly linked with subsequent adverse outcomes in acute coronary syndrome (ACS) patients. Various risk scores (RS) are available to estimate the bleeding risk in these patients.

**Aims:** To compare the predictive accuracy of the three contemporary bleeding RS in ACS.

**Methods:** We studied 4500 consecutive patients with ACS. For each patient, the ACTION, CRUSADE, and Mehran et al bleeding RS were calculated. We assessed their performance either for the prediction of their own major bleeding events or to predict the TIMI serious (major and minor) bleeding episodes in the overall population, in patients with non-ST elevation ACS (NSTEMI) and in those with ST-elevation myocardial infarction (STEMI) patients. Calibration (Hosmer-Lemeshow test) and discrimination (c-statistic) for the three RS were computed and compared. We used the concept of net reclassification improvement (NRI) to compare the incremental prognostic value of using a particular RS over the remaining scores in predicting the TIMI serious bleeding.

**Results:** The best predictive accuracy was obtained by the CRUSADE score either for the prediction of its own major bleeding events (c-statistic=0.80, 0.791, and 0.81 for the entire sample, for STEMI, and for NSTEMI patients, respectively) or to predict the TIMI serious bleed occurrence (c-statistic=0.741, 0.738,

and 0.745 for the whole population, for STEMI and NSTEMI patients, respectively). The lowest bleeding rates observed in patients classified as low risk corresponded to the CRUSADE RS. All scores performed modestly in patients who did not undergo coronariography (all c-statistic  $<0.70$ ). The CRUSADE score was significantly superior to the ACTION model in predicting the TIMI serious bleeding occurrence in terms of NRI overall and by ACS subgroups ( $p<0.05$ ). Overall, the CRUSADE RS exhibited better calibration for predicting the TIMI serious bleeding compared to the ACTION and Mehran et al scores (Hosmer-Lemeshow p-values of 0.26, 0.13, and 0.07, respectively).

**Conclusion:** The CRUSADE score represents, among the more contemporary bleeding RS, the most accurate and reliable quantitative clinical tool in STEACS and STEMI patients. We encourage the utilization of the CRUSADE index for bleeding risk stratification purposes in daily clinical practice and in ACS outcome studies. The performance of the three more contemporary bleeding RS is modest in those patients who received conservative management.

### 1389 Switch and non switch in P2Y<sub>12</sub> inhibition: the real life use of clopidogrel and prasugrel in patients with acute myocardial infarction. Insights from the FAST MI 2010 registry



F. Schiele<sup>1</sup>, E. Puymirat<sup>2</sup>, L. Loggis<sup>3</sup>, G. Dentan<sup>4</sup>, E. Faure<sup>5</sup>, G. Rouault<sup>6</sup>, F. Leclercq<sup>7</sup>, E. Drouet<sup>8</sup>, T. Simon<sup>9</sup>, N. Danchin<sup>2</sup> on behalf of FAST-MI 2010. <sup>1</sup>University Hospital of Besancon, Besancon, France; <sup>2</sup>AP-HP - European Hospital Georges Pompidou, Paris, France; <sup>3</sup>University Hospital Center, Department of Cardiology, Dijon, France; <sup>4</sup>Clinic Fontaine, Fontaine les Dijon, France; <sup>5</sup>Hospital Center of Valence, Valence, France; <sup>6</sup>Hospital of Quimper, Department of Cardiology, Quimper, France; <sup>7</sup>Hospital Arnaud de Villeneuve, Montpellier, France; <sup>8</sup>French Society of Cardiology, Paris, France; <sup>9</sup>AP-HP - Hospital Saint Antoine, Paris, France

**Background:** In patients with AMI, the choice between clopidogrel and prasugrel requires information that is not always available at the early phase, such as indication for PCI or assessment of bleeding and thrombosis risk. When initial clopidogrel treatment seems sub-optimal, switching to prasugrel seems attractive, but is not yet recommended. We assessed baseline characteristics and in-hospital outcomes in prasugrel-treated patients, according to the initial use of clopidogrel before prasugrel initiation.

**Methods:** FAST-MI 2010 is a nationwide French registry that included 4169 patients with AMI in 213 centres. In total, 4115 received thienopyridines, of whom 1259 received prasugrel (31%). Among these, 391 received "de novo" prasugrel (G1), 807 (64%) were treated with clopidogrel first and then switched to prasugrel (G2), of whom 11% had a 60mg loading dose of prasugrel. We excluded 61 pts who received prasugrel initially and subsequently switched to clopidogrel. We compared baseline characteristics, bleeding and ischemic complications between G1 and G2, and then used propensity-score matching (propensity to be treated with prasugrel) to compare outcomes in 2 cohorts with similar baseline characteristics.

**Results:** Age and sex were similar in G1 and G2; more G2 pts had a history of AMI (13% vs 8%,  $P=0.01$ ), PCI (14% vs 9.5%,  $P=0.02$ ), underwent PCI during the hospital stay (96% vs 93%,  $P=0.047$ ) or received lytic treatment for STEMI (21% vs 5%,  $P<0.001$ ). With the exception of major bleeding, which was less frequent in G2 (0 vs 1.0%,  $P=0.004$ ), none of the other complications differed significantly (Table). The 2 propensity-score matched cohorts (316 patients each) had completely similar baseline characteristics and 96% (switch clopidogrel to prasugrel) vs 94% (prasugrel only) followed the recommended indication for prasugrel use; none of the complications differed significantly (switch vs no switch): any bleeding (4.1 vs 6.6%), major bleeding (0 vs 0.3%), stent thrombosis (1.3 vs 0.9%), stroke (0.3 vs 0%), reinfarction (1.3 vs 0.6%), in-hospital death (0.3 vs 0.3%).

**Conclusion:** In this real-world registry, a high proportion of patients treated with prasugrel were switched from clopidogrel therapy (64%). There was no evidence of excess risk of bleeding or in-hospital complications in the patients who were switched, compared with those who received prasugrel treatment only. Further randomized studies are mandatory to determine the safety and efficacy of this strategy.

### 1390 Major improvement in early mortality of AMI over the past 15 years in relation to management changes: data from 4 nationwide French surveys



E. Puymirat<sup>1</sup>, G. Steg<sup>2</sup>, D. Blanchard<sup>3</sup>, P. Goldstein<sup>4</sup>, M. Hanssen<sup>5</sup>, E. Durand<sup>1</sup>, P. Gueret<sup>6</sup>, J.P. Cambou<sup>7</sup>, T. Simon<sup>8</sup>, N. Danchin<sup>1</sup> on behalf of the FAST-MI 2010 investigators. <sup>1</sup>AP-HP - European Hospital Georges Pompidou, Paris, France; <sup>2</sup>AP-HP - Hospital Bichat-Claude Bernard, Department of Cardiology, Paris, France; <sup>3</sup>Clinic Saint Gatien, Tours, France; <sup>4</sup>Hospital Regional University of Lille, Department of Emergency, Lille, France; <sup>5</sup>General Hospital of Haguenau, Department of Cardiology, Haguenau, France; <sup>6</sup>AP-HP - University Hospital Henri Mondor, Department of Cardiology, Creteil, France; <sup>7</sup>University Hospital of Toulouse, Department of Epidemiology, Inserm U558, Toulouse, France; <sup>8</sup>AP-HP - Hospital Saint-Antoine, Faculty of Medicine Pierre & Marie Curie Paris 6, Paris, France

**Background and aim:** The management of AMI has undergone profound changes in the past 2 decades. We assessed early mortality in 4 surveys of AMI