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Does a regional system of care impact on reperfusion strategies in ST-segment elevation myocardial infarction?

Loic Belle (1), Cecile Ricard (1), Stephanie Marliere (2), Vuthik Panh (3), Gerald Vanzetto (2), Jean Jacques Dujardin (4), Magali Fourny (5), Nicolas Danchin (6), José Labarere (7)

(1) *Hôpital, RENAU, Annecy, France – (2) Cardiologie, Grenoble, France – (3) Cardiologie, Annemasse, France – (4) Cardiologie, Douai, France – (5) Evaluation médicale, Grenoble, France – (6) Cardiologie, Paris, France – (7) Evaluation médicale, Grenoble, France*

Purpose: Regionalization of care for ST-segment elevation myocardial infarction (STEMI) has been advocated, although its effect on processes of care – compared with secular evolution – remains uncertain. The aim of this study was to evaluate the impact of a regional system of care on reperfusion strategies for STEMI patients relative to control hospitals.

Methods: We analysed the original data from two nationwide, prospective cohort studies, with the same methods. The first was conducted in November 2000 (FAST MI 2010) and the second in November 2005 (FAST MI 2005). A total of 160 French hospitals participated in both studies. Seven hospitals (2 with percutaneous coronary intervention facilities and 5 without) were involved in a regional system of care implemented in the Northern Alps in 2002 (RESURCOR); 153 control hospitals were located in other French areas with no corresponding regional system of care. From 2002 to 2005, RESURCOR promoted prehospital fibrinolysis followed by routine/rescue coronary angiography. We compared change in rate of prehospital fibrinolysis and routine/rescue coronary angiography after fibrinolysis between 2000 and 2005 in the RESURCOR region versus the control hospitals.

Results: A total of 102 STEMI patients were enrolled in the Northern Alps hospitals and 2377 in the control hospitals. In the RESURCOR area we observed a larger absolute increase in the use of prehospital fibrinolysis (18% vs 63%, $P<0.01$, respectively, in 2000 and 2005) compared with the control hospitals (14% vs 31%, $P<0.01$, respectively, in 2000 and 2005). In the RESURCOR area we observed a larger absolute increase in the use of routine/rescue coronary angiography after fibrinolysis (9% vs 44%, $P<0.01$, respectively, in 2000 and 2005) when compared with control hospitals (7% vs 22%, $P<0.01$, respectively, in 2000 and 2005).

Conclusion: Regionalization of care for STEMI patients may impact on reperfusion strategy in STEMI.

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Management of ST-elevation myocardial infarction in octogenarian patients. Data from ORBI, a prospective registry of 5000 patients.

Guillaume Leurent (1), Benoît Moquet (2), Emmanuelle Fillippi (3), Philippe Castellant (4), Antoine Rialan (5), Jean Philippe Hacot (6), Philippe Druelles (7), Gilles Rouault (8), Isabelle Coudert (9), Hervé Le Breton (1) (1) *CHU Rennes, Département de Cardiologie, Rennes, France – (2) Service de cardiologie, Saint Briec, France – (3) Service de cardiologie, Vannes, France – (4) CHU Brest, Service de cardiologie, Brest, France – (5) Service de cardiologie, Saint Malo, France – (6) Service de Cardiologie, Lorient, France – (7) Clinique Saint Laurent, Service de cardiologie, Rennes, France – (8) Service de Cardiologie, Quimper, France – (9) SAMU, Rennes, France*

Purpose: To determine the actual management of ST-elevation myocardial infarction (STEMI) in octogenarian patients and more.

Methods: We analyzed data collected in “ORBI”, a 6 years prospective registry of STEMI patients admitted within 24 h of symptoms onset to an interventional cardiology centre of Brittany (France). Main data about management and intra hospital outcome were compared between patients older (Group 1) and younger (Group 2) than 80.

Results: 550 of the 5000 patients (11%, mean age 84.6 ± 3) constituted group 1, with a larger female prevalence (51 vs 20% in group 2, $p<0.0001$). Group 1 had a much longer median delay between onset of symptom and call for medical assistance (65 vs 45 min.), and between admission and reperfusion (53 vs 45 min.). Table 1 presents data about the management in the 2 groups, both in the acute phase and at discharge. Last, intra hospital mortality is much higher in group 1 (16.5 vs 4.1%, $p<0.0001$).

Conclusions: Octogenarian patients and more represent a large part of patient treated for STEMI, with significant differences in their presentation and management, and a high mortality.

Table 1 – *Percentages are calculated only in patients undergoing coronary angiography

		Group 1 >80years old n=550	Group 2 ≤ 80 years old N=4450	
Initial management	Fibrinolysis	38 (7%)	723 (16%)	<0.0001
	GP IIb/IIIa receptor inhibitors	223 (40%)	2674 (60%)	<0.0001
	Coronary angiography	493 (89%)	4402 (99%)	<0.0001
	Radial access*	140 (28%)	1511 (34%)	<0.0001
	Primary angioplasty*	386 (78%)	3197 (72%)	0.4
	Thrombo aspiration*	163 (33%)	1874 (42%)	<0.0001
Intra hospital outcome	High degree AV block	40 (7%)	140 (3%)	<0.0001
	Atrial fibrillation	59 (10%)	161 (3.6%)	<0.0001
	Left ventricular ejection fraction (%)	47.2±12	50.6±10	<0.0001
	Total length of stay (days)	8.2±5	6.8±4	<0.0001
Prescription at discharge	Aspirine	439 (95,6%)	4167 (97,7%)	0,007
	Clopidogrel/ Prasugrel	413 (90,0%)	4086 (95,8%)	<0,0001
	β blockers	394 (85,8%)	3895 (91,3%)	<0,0001
	ACE inhibitor	290 (63,2%)	2853 (66,9%)	0,1
	Statine	373 (81,3%)	4057 (95,1%)	<0,0001
	Cardiovascular rehabilitation	22 (5,3%)	1822 (46,6%)	<0,0001

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Comparison of bleeding complications and three-year survival of low molecular weight heparin versus unfractionated heparin for acute myocardial infarction. The FAST-MI registry

Etienne Puymirat (1), Nadia Aissaoui (1), Johanne Silvain (2), Laurent Bonello (3), Thomas Cuisset (4), Pascal Motreff (5), Vincent Bataille (6), Eric Durand (1), Simon Tabassome (7), Nicolas Danchin (1) (1) *Hôpital Européen Georges Pompidou (HEGP), Cardiologie, Paris, France – (2) Hôpital de la Pitié-Salpêtrière, Paris, France – (3) Département de Cardiologie, Hôpital Universitaire Nord, Aix-Marseille Univ, Marseille, France – (4) CHU Timones, Marseille, France – (5) University Hospital Center Gabriel Montpied, Department of Cardiology, Clermont Ferrand, France – (6) CHU Rangueil, Toulouse, France – (7) Hôpital Saint Antoine, cardiologie, Paris, France*

Background: Recent clinical studies suggest that low molecular weight heparin (LMWH) could be an effective and safe alternative to unfractionated heparin (UFH) for patients with acute myocardial infarction (AMI).

Aims: To assess the impact of the choice of anticoagulant (LMWH vs. UFH) on bleeding, the need for blood transfusion and three-year clinical outcomes in patients with AMI from the FAST-MI registry.

Methods: FAST-MI is a nationwide registry carried out in France over a 1-month period in 2005, including consecutive patients with AMI admitted to intensive care unit <48h from symptom onset in 223 participating centers.