

Table 1: CMR data according to the presence of fQRS. N(%) or median (25th-75th).

	No fQRS n=118 (n=739)	fQRS n=128	p
LVEF, %	56 (48-62)	49 (39-58)	<0.001
EDV index (mL/m ²)	135 (105-170)	155 (129-190)	<0.001
ESV index (mL/m ²)	60 (47-77)	76 (57-104)	<0.001
Presence of PMO, n (%)	46 (39)	73 (57)	0.007
Presence of MO, n (%)	71(60)	93 (72)	0.052
Extent of PMO, (%)	1.98 (0.95-4.2)	3.5 (1.7-5.6)	0.018
Extent of MO, (%)	8.55 (3.9-14.7)	12.7 (6-23)	0.022
IS, (%)	16 (9-25)	25 (15-34)	<0.001

Conclusions: These findings give further support to the argument that fQRS is a reliable marker of infarct size and could explain its strong prognostic value after AMI.

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Plasma N-terminal pro-B-type natriuretic peptide and heart rate variability in patients with acute myocardial infarction. Data from RICO survey

Gilles Soulat [Orateur] (1), Daniel Moreau (1), Luc Lorgis (1), Laurent Mock (2), Bernadette Daumas (1), Laurie Dufour (1), Claude Touzery (1), Yves Cottin (1), Marianne Zeller (3)
(1) *CHU Bocage, Cardiologie, Dijon, France* – (2) *Clinique de Fontaine, Cardiologie, Fontaine Les Dijon, France* – (3) *IFR 100 Santé-STIC, LPPCE, Dijon, France*

Background. We investigated the relationships between the autonomic nervous system, as assessed by heart rate variability (HRV) and levels of N-terminal Pro-B-type Natriuretic Peptide (Nt-proBNP), in the setting of acute myocardial infarction (MI).

Patients and method. Plasma Nt-proBNP (Elecsys, Roche) was measured on admission in patients admitted < 24h for acute MI. Patients with chronic atrial fibrillation or pace maker were excluded. The mean of standard deviation of RR intervals (SDNN), percentage of RR intervals with >50ms variation (pNN50), square root of mean squared differences of successive RR intervals (rMSSD), and frequency domain parameters (total power (TP), high frequency and low frequency power ratio (LF/HF)) were assessed by 24h holter ECG monitoring at 5 ± 2 days after MI onset.

Results. Among the 1018 patients included, median (IQR) Nt-proBNP value was 681(159-2432) pmol/L. Patients with highest quartile of Nt-proBNP were older, were more likely to be women, hypertensive, had higher admission heart rate, lower LVEF, but were less likely to be smokers. Highest Nt-proBNP quartile group had lower SDNN, LF/HF and total power but similar pNN50 and rMSSD levels. Nt-proBNP levels was negatively associated with TP ($r=-0.17$, $p<0.001$), SDNN ($r=-0.19$, $p<0.001$), LF/HF ($r=-0.37$, $p<0.001$), and LF ($r=-0.29$, $p<0.001$) but not HF ($r=-0.043$, $p=0.172$). Multiple regression analysis showed that plasma propeptide level remains predictive of LF/HF (B(SE)=-0.065(0.015), $p<0.001$), after adjustment for confounding (Beta-blockers, female, and age).

Conclusions: Our population-based study suggests the importance of Nt-proBNP levels to predict decreased HRV after acute MI. Moreover, our results highlight that high Nt-proBNP levels are associated with a decrease in the effects of the sympathetic system. Further experimental studies are needed to explore the impact of such findings.

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Multiple complex coronary lesions and periodontal disease

Laurie Dufour [Orateur] (1), Odile Troisgras (2), Christine Romagna (3), Luc Lorgis (1), Carole Richard (1), Philippe Buffet (1), Gilles Soulat (1), Yves Laurent (2), Jean Marie Casillas (2), Gilles Rioufol (4), Claude Touzery (1), Marianne Zeller (5), Yves Cottin (1)
(1) *CHU Bocage, Cardiologie, Dijon, France* – (2) *CHU Dijon, Centre de Réadaptation, Dijon, France* – (3) *CHU Dijon, Odontologie, Dijon, France* – (4) *Hôpital Louis Pradel, Lyon, Cardiologie, Bron, France* – (5) *IFR 100 santé-STIC, LPPCE, Dijon, France*

Context: Periodontal disease, including bone loss, increases the risk of atherosclerosis through plaque destabilization. Multiple complex coronary lesions (MCL), defined by stenosis >50%, and at least two of the following: chronic occlusion, impaired flow, thrombus, irregularity, and ulceration of the lesion, are associated with multifocal destabilization of atherosclerotic coronary plaque. We investigated whether significant bone loss could predict the presence of MCL.

Materials and methods: 150 consecutive patients who initiated outpatient cardiac rehabilitation between 2007 and 2010 for myocardial infarction <1 month and who underwent coronary angiography were included. Patients without or simple complex coronary lesions (SCL group) were compared to patients with MCL. A panoramic dental x-ray was made including bone loss > 50%.

Results: Over 20% of patients had MCL (32/150), and patients in the SCL and MCL groups had similar cardiovascular risk factors. However, patients with MCL were less likely to be women and more likely to have multivessel disease than were patients in the SCL group (21% vs. 6%, $p=0.051$, and 88% vs. 46%, $p<0.001$). Bone loss > 50% tended to be more frequent in patients with MCL than in those with SCL (50% vs. 32%, $p=0.063$). In addition, patients with MCL had a higher CRP level (CRP > 10 mg/L: 15% vs. 42% $p=0.001$). In multivariate analysis, multivessel disease (OR (95% CI): 6.63 (2.09-21.03), and CRP > 10 mg/L (OR (95% CI): 3.98 (1.48-10.69)) were associated with the presence of MCL. Female sex (OR (95% CI): 0.23 (0.04-1.22)) tended to be associated with SCL. In addition, bone loss > 50% significantly increased the risk of MCL (OR 2.63 (1.03-6.71) $p=0.043$) even after adjustment for other predictors of MCL.

Conclusion: Bone loss, a simple parameter of periodontal evaluation, correlated with complex and multiple coronary lesions, independently of other known factors associated with MCL, including systemic inflammation.

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Multislice computed tomography to rule out coronary vasculopathy in heart transplant patients

Olivier Barthelemy [Orateur] (1), Shaïda Varnous (2), Dan Toledano (3), Flor Fernandez (2), G. Helft (1), Claude Le Feuvre (1), Iradj Gandjbakhch (2), J.P. Metzger (1), Alain Pavie (2), Philippe Cluzel (3)
(1) *AP-HP, CHU Pitié-Salpêtrière, Cardiologie Médicale, Paris Cedex 13, France* – (2) *AP-HP, CHU Pitié Salpêtrière, Chirurgie Cardiothoracique, Paris, France* – (3) *AP-HP, CHU Pitié-Salpêtrière, Radiologie, Paris, France*

Aim: Assess if invasive coronary angiogram (CA) can be replaced by multislice coronary tomography (MSCT) (64 – 1256-row) for the systematic rule out of coronary vasculopathy in heart transplant patients.

Methods: Electrocardiogram-gated contrast-enhanced MSCT (Philips, Brilliance, 64-row for the first 25 patients and 256-row for the others) was performed 24 hours before annual CA. MSCT parameters, adapted to the patient's weight, include 120 kV, 800mAs, 0.625 mm slice thickness, 0.42s/0.27s rotation time. Coronary segments > 1.5 mm were classified as stenosis (stenosis > 50%), atheroma (stenosis < 50%) or normal and blindly compared to CA.

The primary endpoint was the negative predictive value (NPV) of MSCT for the detection of significant (stenosis > 50%) coronary artery disease (CAD). Secondary endpoints were the comparison of X-Ray (mSv) and iodine contrast agent (ml) exposures. We plan to present the final results (n=102) at SFC meeting.

Results: 87 patients were prospectively included. Mean age was 52 ± 13 years. Heart transplantation occurred 6 ± 5 years before inclusion. 1108 (97.8%) segments