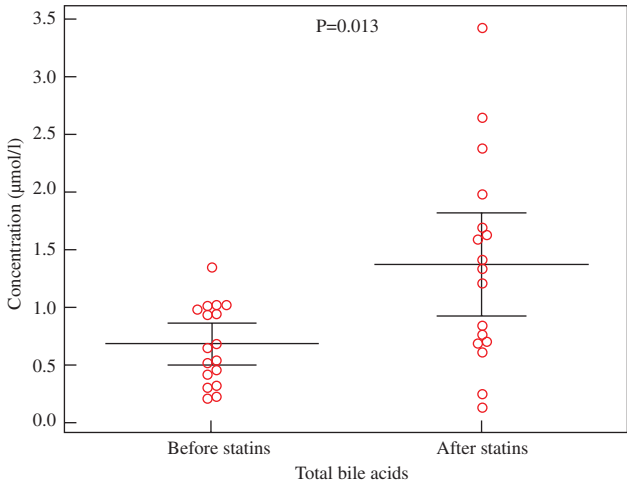
Aim Statins are known to reduce cardiovascular events in atherosclerotic patients. Given the experimental protective effect of BAs against atherosclerosis, the aim of this preliminary study was to dertermine the total BAs concentration in sera after statins administration.

Methods Between January 2015 and April 2015, patients hospitalized for a coronary angiogram and starting a statins treatment for coronary atheroma were included. Exclusion criteria were post cardiac arrest, non-fasting status, hepatic disease, antibiotics and corticosteroids. The total BAs concentration was measured before and 1 month after the initiation of statin therapy by liquid chromarography mass spectrometry. Wilcoxon test was used for statistical analysis.

Results On a cohort of 360 patients, 37 were eligible and 17, aged of 54±9.6 years old have been retrospectively included. 95% were prescribed with atorvastatin (68% with atorvastatin 40mg). The mean concentration of the total BAs before statin was 0.68µmol/L (SEM 0.08µmol/L) and 1.37µmol/L after (SEM 0.21µmol/L) (p=0.013, figure 1).

Conclusion statins administration is associated with a doubling of circulating BAs after one month of treatment. This raises a question about statins increasing BAs synthesis by the liver: the deflection of the cholesterol synthesis by the liver into BAs instead, could participate to the efficacy of statins. This could theoretically be beneficial by slowing down the atheroma development through anti-inflammatory effects of BAs on the macrophage of the plaque.



Abstract 0315 – Figure

The author hereby declares no conflict of interest

0321

In the aera of new P2Y12 inihibitors, high platelet reactivity on aspirin in patients with ST elevation myocardial infarction remains a predictor of ischemic events

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Background Despite dual antiplatelet treatment with the new P2Y12 platelet receptor antagonists (P2Y12i), major ischemic events are common following ST elevation myocardial infarction (STEMI).

Objectives To assess separately resistance to aspirin (HPR-aspirin), resistance to P2Y12i (HPR-P2Y12i) and their association during the acute phase of STEMI in relation to the occurrence of ischemic events.

Methods We included all consecutive patients admitted for STEMI in our center between January 2013 and December 2013. All patients received a loading dose followed by a maintenance dose of aspirin (75mg/day) and either clopidogrel, prasugrel or ticagrelor. Platelet reactivity was assessed 4±1 days and 75±15 days after admission using light transmission aggregometry (LTA) with arachidonic acid (AA) and serum Thromboxane-B2 concentration to assess HPR-aspirin and LTA-ADP and VASP index to assess HPR-P2Y12i. Major cardiac and cerebrovascular events (MACCE) were recorded during one year.

Results 106 patients (61years old, 76% male, 20% with diabetes) were included. STEMI was anterior in 52% and LV ejection fraction at discharge was 51±9%. At day 4 after STEMI, HPR-aspirin measured by LTA-AA alone was found in 23% patients and was correlated with serum thromboxane inhibition, HPR-P2Y12i (VASP≥50% and LTA-ADP≥65%) was observed only in 7% and combined resistance was present in 4% of the patients. Diabetes and age were predictors of HPR-aspirin. The large use of ticagrelor (34%) and prasugrel (50%) explained the low rate of P2Y12i resistance. HPR-aspirin was persistent 75 days later in 36% patients who were resistance at day 4. At 1 year, 7.9% patients had experienced MACCE. HPR-aspirin alone and HPR for both aspirin and P2Y12i were significantly associated with MACCE.

Conclusion Aspirin resistance is frequent just after STEMI and is associated with MACCE especially when associated with P2Y12i resistance.

The author hereby declares no conflict of interest

0188

Suboptimal control of low-density lipoprotein cholesterol in French patients after an acute coronary syndrome. Contemporary data from DYSIS IIACS study

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Aim To document low-density lipoprotein cholesterol (LDL-C) values during hospitalization of ACS patients with/without lipid-lowering therapy (LLT) at admission, and achievement of the ESC LDL-C target (LDL-C ≤70mg/dL) at 4 months following the acute event using data from the French cohort of the DYSIS II_{ACS} study.

Methods DYSIS II_{ACS} was a multicentre prospective observational cohort study (recruitment: Oct 2013 to Oct 2014) conducted in 24 coronary care units in France. Adults hospitalized for an ACS event and who had a lipid panel measured within 24 hours of admission were consecutively enrolled. Eligible patients had to be on LLT for ≥3 months or taking no LLT. A telephone follow-up interview was carried out with patients (or their next of kin) 120±15 days after the index event.

Results Of the 468 patients enrolled, 50.6% had ST-elevation myocardial infarction/left bundle branch block, 40.8% had non-ST-elevation myocardial infarction, and 8.5% had unstable angina. Of the 277 (59.2%) patients on LLT at admission, 25.3% had an LDL-C <70mg/dl (Table). Most patients (96.4%) were on statin therapy at discharge (mean+SD dose calculated in atorvastatin 49±28mg/day). Non-statin LLT was used in 5.6% patients at discharge (61.5% with a cholesterol-absorption inhibitor). At 120 days after admission, 50.9% of ACS patients with follow-up data had achieved the LDL-C target.

Conclusions These observational data from contemporary French clinical practice in coronary care units indicate suboptimal LDL-C control, with a substantial proportion of very high cardiovascular risk patients presenting with elevated LDL-C despite taking LLT. Four months after the acute event, half of the patients (with data) failed to achieve the target, with a large difference between mean value and target LDL-C.

The author declares a conflict of interest: Merck employee

Abstract 0188 – Table: Characteristics of and lipid values in ACS patients: during hospitalization and at 120 days

	All patients (n=468)	LLT at admission (n=277)	No LLT at admission (n=191)
Age (years)	**65±12**	67±12	61±12***
Men	**80.1**	78.0	83.2
Diabetes type 2	**21.8**	27.4	13.6**
Chronic kidney disease	**3.8**	4.0	3.7
Lipid variables (within 24 h of admission)			
LDL-C (mg/dL)	**110.6±43.4**	93.6±36.4	135.3±40.9***
LDL <70 mg/dL (%)	**16.9**	25.3	4.7***
Difference between mean and target values (mg/dL)	**52.1±38.3**	37.0±32.1	69.3±37.5***
Statin at hospital discharge	**96.4**	97.5	94.8
Lipid variables (120 days after admission)	**(n=159)**	(n=86)	(n=73)
LDL-C (mg/dL)	**76.1±31.1**	79.7±31.1	71.9±30.7*
LDL-C <70 mg/dL	**50.9**	41.9	61.6*
Difference between mean and target values (mg/dL)	**29.7±25.8**	28.0±26.5	32.6±24.7

Data are mean±SD or %. *P<0.05; **P?0.001; ***P?0.0001 (LLT vs no LLT)

January 16th, Saturday 2016

0542

Mental status at presentation as a predictor of outcome in acute coronary syndrome among elderly patients

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Purpose To assess the impact of mental status alteration (MSA) at presentation for acute coronary syndrome (ACS) on cardiovascular events among elderly.

Methods After exclusion of patients with unstable conditions, neurological disorders or language deficiency, we assessed MSA defined by an abnormal confusion assessment test or Mini Mental Status Evaluation (MMSE<27) in 301 patients ≥75 years old. 3-months follow-up was completed in all patients. Mortality, the primary endpoint of the study was assessed using a cox model adjusted on age, gender, and GRACE score.

Results MSA was identified in 161(53%) patients. MSA was associated with older age (83±5 vs 81±5, p<0.0001), female gender (53 vs 41%, p=0,04), lower education level (p=0.0001), and higher rates of Killip Class ≥2 (47 vs 29%, p=0.03). The invasive management and medical therapy were similar between patients with or without MSA. Rates of 3 months mortality and re-hospitalization were higher in MSA patients (16.1 vs 3.6%, p=0.0003 and 40.3 vs 23.2%, p=0.002). The adjusted cox model identified MSA (HR 3.6 [1.4-9.6]) ormmSE (HR 0.87 per point [0.82-0.94]) as well as GRACE score (HR 1.02 per point[1.0001-1.03]) as independent predictors of 3-month mortality.

Conclusions MSA is detected in a majority of patients ≥75 years old presenting with ACS using simple clinical tests. Despite similar management the rates 3-month mortality and re-hospitalization are dramatically increased in such patients. MSA is an independent predictor of mortality in the elderly. Our study supports the routine assessment of MSA in such patients as a risk assessment tool. A specific management of such high-risk patients should be considered and assessed.

The author hereby declares no conflict of interest

0256

Accuracy of visual estimation compared to objective anatomical and functional measurement, QCA and FFR, in coronary lesions

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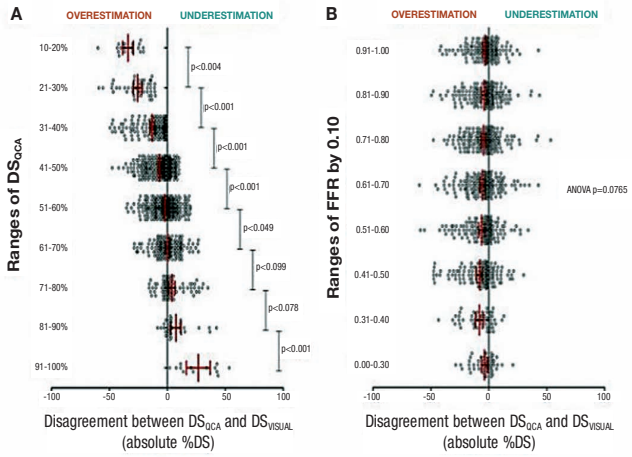
Purpose Despite its known limitations, evaluation of coronary artery disease is still predominantly based on visual estimation (VE). The aim of our study is to assess the correlation between VE and objective anatomical measures, such as quantitative coronary angiography (QCA), and objective functional measures, such as fractional flow reserve (FFR).

Methods In 1215 lesions, FFR was measured and percent diameter stenosis (DS) were obtained by both QCA and VE.

Results In our population the median of FFR was 0,79 (0,66-0,92), the median of DS_{QCA} was 50% (40-60) and the median of DS_{VE} was 54% (40-70). A significant but weak correlation was found between DS_{VE} and DS_{QCA} (r=0,28; CI: 0,16, 0.42; p<0.001) and between DS_{VE} and FFR (0.20; CI: 0.06, 0.34; p<0.001). The sensitivity, specificity and diagnostic accuracy of 50% (strictly>50) DS_{VE} to predict a DS_{QCA}>50% were 87%, 45% and 50%, (65, 80, 47) respectively. The corresponding values were 90%, 47% and 45% (72,70,45) for an FFR<0.80, respectively.

Compared to DS_{QCA}, DS_{VE} tends to overestimate stenosis below 60% DS_{QCA}, most pronaunced in the mildest ranges, while an increasing trend of underestimation occures over 70% DS_{QCA} (Figure A). In the sabe comparison, but when lesions are classified according to their hemodynamic severity constant level of overestimation with is observed (Figure B).

Conclusions Visual estimates of the angiographic stenosis severity shows weak agreement with objective morphologic and functional metrics.



Abstract 0256 – Figure

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