Methods and Results: In this preliminary work, a retrospective analysis on 288 patients (227 men (79%), 61 women (21%)) who had received an ABPM in our Heart Failure unit between 1999 and 2006 was made. Our study population, with a mean age of 59.6 years consists of 45.2% ischemic cardiomyopathy, 42.6% idiopathic dilated cardiomyopathy, 9.3% hypertrophic cardiomyopathy, 2.9% valvular cardiomyopathy. Almost all are symptomatic (NYHA I (8.3%) II (48.3%), III (37.8%) IV (5.5%)) and average ejection fraction (EF) is 28.2%. ABPM data and patient characteristics are studied in bivariate analysis: EF correlated positively with mean pulse pressure (PP) (daytime PP: r=0.47,p<0.001, nighttime PP: r=0.44,p<0.001), mean 24h-systolic blood pressure (SBP)(daytime SBP: r=0.39, p<0.001, nighttime SBP r=0.33, p<0.001) but no significance with dipper status (p<0.05). Significant difference found for 24 h-PP (p<0.02), dipper status between diabetic (n=60/288) and no diabetics patients. Creatinine SBP: r=0.39, p<0.0001, nighttime SBP: r=0.33, p<0.001) but no significance with nighttime PP: r=0.44, p<0.001), mean 24h-systolic blood pressure (SBP)(daytime SBP: r=0.39, p<0.001, nighttime SBP r=0.33, p<0.001) but no significance with dipper status (p<0.05). Significant difference found for 24 h-PP (p<0.02), dipper status between diabetic (n=60/288) and no diabetics patients. Creatinine

Conclusions: Preliminary results of this study appear to be consistent with medical knowledge. Our prospective study of survival, currently underway in these patients, will allow us to identify prognosis interest of ABPM in CHF.

Comparative efficacy and safety of enoxaparin and fondaparinux in non-high risk acute pulmonary embolism : a adjusted propensity score analysis

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Background: Guidelines recommend low molecular weight heparin (LMWH) and fondaparinux (fonda) over unfractionated heparin (UFH) for initial treatment of acute pulmonary embolism (PE), except in patients (pts) at high risk of bleeding & with severe renal dysfunction. No trial has assessed the comparative efficacy of enoxaparin (enox) and fonda in this setting.

Methods: Prospective, multicenter registry. Pts with proven recent PE (symptom onset <15 days), treated with approved regimens of enox or fonda were included. Pts with high risk PE, and those with recent or active bleeding, recent surgery or stroke, or renal failure were excluded. We calculated a propensity score by logistic regression (i.e. predicted probability of treatment by enox as opposed to fonda). Combined in-hospital endpoint was defined as death, recurrent PE or major bleeding. Secondary endpoints were residual pulmonary vascular obstruction (RPVO) at discharge and 6m, and 6m mortality.

Results: Of 501 pts included between 2006 and 2010, 229(46%) received enox and 272 (54%) received fonda. 5.2(%) pts under enox had recurrent PE vs 5 (1.8%) fonda pts (p=0.96). 13.5(%) enox pts and 9.3(%) fonda pts had major bleeding (p=0.19), in-hospital mortality was 3.5% and 1.1% respectively (p=0.07). During in-hospital stay, 19.8(3%) of pts treated with enox reached at least 1 clinical endpoint vs 12.4(%) fonda pts (p=0.07). After adjusting on propensity score, there was no significant difference in death, recurrent PE, major bleeding or combined endpoint (enox vs fonda, OR=1.45 (0.67-3.14)). RPVO at discharge was 28.4±14.6% in enox vs 27.2±13.9 in fonda pts (p=0.57). There was no difference in RPVO at 6m. The 6m mortality rate was 8.5% in enox pts vs 9.3% in fonda pts (p=0.76).

Conclusion: Our results suggest that enox and fonda can be used interchangeably, as efficacy and safety profiles are comparable in non-high risk acute PE patients. Neither molecule appears to induce an excess bleeding risk as compared to the other.

After acute coronary syndrome, atheroma burden predicts cardiovascular prognosis of patients receiving optimized secondary prevention measures.

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Background: After an acute coronary syndrome (ACS), pharmacologic therapy and lifestyle intervention (optimal medical therapy, OMT) are efficient in reducing cardiovascular (CV) events. However, even if recommended secondary prevention goals are reached, a subset of patients still present CV events.

Aim: To identify biological or cardiovascular markers predicting the residual risk of CV events in post-ACS patients receiving OMT.

Patients and methods: 990 patients benefited from an evaluation of risk factors and atherosclerosis lesions, and optimization of long-term treatment and education. Traditional CV risk factors and atheroma disease markers (intima-media thickness (IMT), carotid atheroma, Ankle Brachial Index (ABI) and number of coronary arteries with >50% stenosis) were evaluated 3 months after ACS. CV events were recorded at follow-up (CV death, ACS, stroke, heart failure, revascularization).

Results: At a median follow-up of 20 months, more than 80% of the patients reached recommended prevention goals. 116 total CV events were recorded. Diabetes was the only CV risk factor significantly associated with CV events in multivariate analysis (including age, sex, hypertension, LDL cholesterol, smoking, diabetes and hsCRP); HR 1.61 (1.09-2.39), p=0.017. In multivariate analysis including CV risk factors and atheroma disease markers (peripheral vascular disease (PVD) defined as ABI<0.9, carotid plaque >50%, IMT>0.7mm, 3-vessel and/or left main coronary disease), only PVD remained significantly associated with CV events; HR 1.83 (1.02-3.31), p=0.04. The number of vascular beds involved was associated with poorer prognosis: HR for 3 vascular-beds disease 3.85 (1.72-8.03) p=0.001, given 1 vascular-bed disease as a reference group.

Conclusion: In post-ACS patients with OMT, PVD and atheroma burden represent powerful prognostic markers of CV events, while diabetes remains the only independent marker of CV events among traditional CV risk factors.

Early improvement in peripheral vascular tone following smoking cessation using nicotine replacement therapy: aortic wave reflection analysis

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Objectives: Cigarette smoking induces cardiovascular pathology and worsens arterial stiffness. Arterial stiffness can be assessed non-invasively on 2 indices: pulse-wave velocity (PWV), indicating aortic stiffness, and augmentation index (Alx), indicating aortic wave reflection. The impact of smoking cessation (SC) nicotine replacement therapies (NRT) on arterial stiffness remains unknown.

Methods: Alx and PWV were studied prospectively (Spygmocor) in 26 long-term smokers (>10 cigarettes/day; mean age, 43±6 yrs) before (V1) and 28 and 56 days (V2,V3) after SC supported by NRT. Two-way repeated-measures ANOVA was used with patients serving their own controls on intention-to-treat analysis. Abstinence was ascertained when exhaled carbon monoxide (CO) was <10ppm; the quantity of NRT absorbed was assessed from the serum cotinine level.

Results: 16/24 patients (67%) were abstinent at end of study; 8/24 had cut down on smoking; 2 were lost to follow-up. CO and serum cotinine levels fell after SC. Mean Alx for the population as a whole was 23.4% at V1, with significant early reduction by V2 (16.2%) and V3 (13.9%) (ANOVA p<0.001). PWV, peripheral blood pressure and heart rate were unchanged. Multivariate analysis failed to identify predictive factors among baseline characteristics, cigarette addiction levels, or evolution of expired CO or serum cotinine.

Conclusions: The improvement in Alx and stability of PWV after SC with NRT indicate improved peripheral vascular tone. This may account for the early clinical benefit of SC observed even when associated to NRT.