absence of CAD in 9 of 11 individuals who ultimately had negative catheterization results (81.8% specificity). However, the overall sensitivity of the HF QRS ECG technique for identifying uncomplicated CAD could be increased to 100% (10/11 patients correctly identified) with a simultaneous improvement in specificity to 100% (11/11 non-CAD patients correctly identified) when the new 12-lead HF QRS ECG criteria were applied to the same individuals.

Conclusions: We conclude that 12-lead resting HF QRS ECG is a very promising noninvasive technique for identifying uncomplicated CAD.

**1164-2**

**Hypnosis but Not Drug Sedation Selectively Abolishes the Increase in Cardiac Sympathetic Activity Associated With Myocardial Ischemia During Percutaneous Transluminal Coronary Angioplasty**

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Objectives. The aim of this study was to assess the influence of hypnosedation on the relationships between proximal coronary blood flow andHeart rate variability during the procedure, and heart rate spectral variability was studied. Normalised units (nu) of low frequency (LF nu, 0.04-0.15 Hz) and high frequency (HF nu, centred on the respiratory frequency) components and LF/HF ratio were calculated. Results. In both groups, patients with the ST segment shift from the baseline values to the first balloon inflation from 0.02±0.01 to 0.09±0.6 mm and from 0.02±0.08 to 0.1±0.6 respectively (p<0.05). In Group 1, the LF component (band) and LF/HF ratio significantly increased compared to baseline exclusively during the first balloon inflation (from 0.02 to 0.15 to 0.15 to 0.05, p<0.001). On the contrary, no significant variation of spectral parameters (from baseline to balloon inflation) was shown in Group 2. Conclusion. The increase in cardiac sympathetic activity associated with myocardial ischemia during PTCA is selectively abolished by hypnosis but not by drug sedation.

**1164-13**

**Prevalent Low-Frequency Oscillation of Heart Rate Is a Powerful Predictor of Postinfarction Mortality: Comparison of Two Computational Methods**

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Background: A powerful postinfarction risk stratifier (prevalent low-frequency oscillation, PLF) based on computing using Blackman-Tukey correlogram (BTC) was recently established in the placebo population of EMIAT trial. This study investigated an alternative approach to the spectral analysis of PLF.

Methods: RR interval series of all 5-min segments of baseline Holter recordings (n=633) were re-examined by the method of averaging periodicograms according to Welch (APW) with frequency resolution of 1/160 Hz. Maximum and distinct peak within LF band was detected in each spectrum and their frequencies were averaged to obtain the PLF index. Cox’s univariate and multivariate regression analysis was used to establish the association of LVEF ≤ 30%, heart rate variability (HRV) index ≤ 25, Turbulence Slope (TS) ≤ 2.5 ms/RR (previously established cut-off points), and PLF ≥ 0.1 Hz (40% sensitivity) with all-cause mortality within 614 days following infarction.

Results: PLF ≥ 0.1 Hz had a relative risk (RR) of 6.3 (95% CI 3.8 - 10.4, p = 10^-14) for all-cause mortality compared to RR of 3.0 (95% CI 1.9 - 4.7, p = 3 x 10^-3) obtained by previously used BTC method. Results of Cox’s multivariate regression analysis for both APW and BTC methods are shown in the Table.

Conclusion: APW method substantially improved the stratification power of PLF.

### Table

<table>
<thead>
<tr>
<th>Method</th>
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<td>RR 95% CI</td>
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<td>0.194</td>
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<tr>
<td>HRV index</td>
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<td>TS</td>
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<tr>
<td>PLF</td>
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</table>

**1164-14**

**Evaluation of Heart Rate Variability, Late Ventricular Potentials, and Inducibility of Ventricular Tachycardia in Patients With Myotonic Dystrophy Type 1**


Background. Myotonic dystrophy type 1 (MD1) is a multisystem disease with cardiac involvement. Ventricular tachycardia (VT) is common in these patients (pts) and may be causally related to sudden death. The aim of the study was to evaluate in MD1 pts non-invasive and invasive parameters that have been associated with clinical VT in other populations.

Methods. Among 202 MD1 pts routinely followed in our Center, 32 pts (10 female, mean age: 52.4±10.3 years) presented with symptoms and/or brady/syntutchyrthythms, underwent electrophysiological (EP) evaluation. The EP study included programmed ventricular stimulation for VT induction. Time and frequency-domain heart rate variability analysis was performed on 24-hour Holter electrocardiographic recordings in all 32 MD1 pts and in 10 healthy age-matched controls. In addition, the presence of late ventricular potentials (LVPs) was assessed by signal averaged ECG.

Results. In MD1 pts, a statistically significant depression of the indexes of parasympathetic activity was detected by frequency domain heart rate variability analysis, as compared to the control group (High Frequency components 519.0±268.4 vs 997.3±208.4 mm^2, p<0.05; Low Frequency/high Frequency ratio 2.6±0.6 vs 1.5±0.5, p<0.05). LVPs were present in the majority of MD1 pts (60.0%, 31%), while in controls they were not observed in any patient. The increase of LF/HF ratio was associated with mortality compared to RR of 3.0 (95% Cl 1.9 - 4.7, p = 3 x 10^-1) obtained by previous studies of LVEF < 30%, heart rate variability (HRV) index ≤ 1.5, Turbulence Slope (TS) ≤ 2.5 and BTC methods are shown in the Table.

Conclusions. Among MD1 pts with an indication for EP study, a high incidence of heart rate variability abnormalities, LVPs and VT inducibility was found. However, parameters of autonomic dysfunction and LVPs were not predictive of inducibility of sustained VTs, suggesting that invasive and non-invasive tests provide complementary information on the arrhythmia profile of MD1 pts. Further follow up studies are needed to correlate these findings to the development of clinical VTs.

**1164-15**

**QT-RR Dynamics in Coronary Artery Disease by Gender**

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Background: The aim of this study is to evaluate differences in QT-RR interval dynamics in men in relation to the presence of coronary artery disease (CAD) with and without left ventricular dysfunction (LVD). Methods: The study population consists of 193 healthy subjects, 292 CAD patients with preserved left ventricular function (EF=40%), and 46 CAD patients with LVD (EF<40%). For each subject, 24-hour Holter monitoring was performed with the QT interval measured and assessed automatically using our custom-made Compass program. The slope of the relationship between QT and RR intervals during daytime and nighttime by gender were compared among the three groups.

Results: The Table shows QT-RR regression slopes for each subset. Across each group, females have a significantly greater slope of the QT-RR relationship than males (p<0.001). Females with CAD demonstrate much steeper slopes during daytime than nighttime hours (p<0.001) whereas day-night differences are much smaller in males with CAD. There is a significant increase in the slope of the QT-RR relationship as the severity of heart disease worsens from healthy subjects, to CAD patients without LVD, and finally CAD patients with LVD (p<0.001). Conclusion: Coronary artery disease is associated with impaired QT-RR dynamics that worsen with left ventricular dysfunction. Females have a steeper QT-RR slope than males, and this effect increases with increasingly advanced heart disease. Gender-related differences in QT dynamics are potentiated in patients with CAD.

<table>
<thead>
<tr>
<th>Gender</th>
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<tr>
<td>Males</td>
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<tr>
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</table>

**1164-16**

**Usefulness of Concordant ST Elevation and V1-3 ST Depression in Risk Stratifying Patients With Presumed Acute Myocardial Infarction and Left Bundle Branch Block**

Chris K. Wong, Harvey D. White, The HERO-2 investigators, Green Lane Hospital, Auckland, New Zealand

Background: The outcome after thrombolytic therapy for patients with presumed new LBBB and AMI is unclear.

Methods: In the HERO-2 trial, we determined in patients randomized with LBBB if concordant ST elevation (in the same direction as the QRS complex) or V1-3 ST depression predicts outcome. For each LBBB patient, we matched one control patient with normal intraventricular conduction for age, gender, pulse rate, systolic blood pressure, Killip class, and geographic region. Results: 300 patients had LBBB and 15,340 had normal intraventricular conduction. The frequency of enzymatic MI was lower in patients with LBBB than in controls (93.7% vs 88.7%, P<0.007). In the LBBB patients, 92 had and 208 did not have concordant ST elevation >1.0mm or V1-3 ST depression > 1.0mm. The presence of ST changes was specific (96.6%) but not sensitive (37.6%) for diagnosing AMI. 30-day mortality was not different between the 92 LBBB patients with ST changes and their controls (21.7% vs 25%, P>0.05); but was lower in the 208 LBBB patients without ST changes than in their controls (13.5% vs 21.8%, P=0.025). On multivariable analysis, there was a relationship between ST changes during LBBB and 30-day mortality, P=0.007 (Table).