amplitude waves, where electric activation of both ventricles are balanced. Endocardial electrical manifestation of the site of origin of VF corresponds to the fragmented signals between myocardial EGM. The fragmentation initially appears in recordings closer to the origin, usually near the septum (His recording) and later in different sites of the heart.

Conclusions: The analysis of electrocardiographic and endocardial recordings helps understand the mechanisms of VF.

23.2 CARDIAC AUTONOMIC NERVOUS SYSTEM EVALUATION IN PARKINSON DISEASE AND MULTISYSTEM ATROPHY: VALUE OF HRV

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Introduction: A protocol for Cardiac Autonomic Nervous System Evaluation (CANSE) was used to quantify the degree of dysautonomia in Parkinson disease (PD) and Multisystem Atrophy (MSA) patients (pts).

Methods used: 14 pts, 12 with PD, 2 with MSA and 14 normal controls (NC) studied. Neurological derangement quantified with UPDR III and Hoehn/Yahr scales (HYS). CANSE performed according to the 5-tests Ewing Score (ES) [0–1/10 (normal), 2–4/10 (borderline), 5–10/10 (abnormal)] and with and Heart Rate Variability analysis (HRV), carried out in the time-domain (TD) and frequency-domain (FD), calculated in 5-minutes intervals during sleep and activity from 24h ECG Holter recordings.

Results: only for HYS evidenced significantly higher value in MSA as compared with PD ($p < 0.01$). ES was higher in MSA (mean score 5.5) compared with PD (2.88), PD + diabetes (3.66) and NC (1.5). SDNN index and r-MSSD ($p < 0.05$) were abnormal in PD+MSA. Total Power, LF-HF components and LF/HF ratio were abnormal in PD/MSA. Higher ES and HRV abnormality correlated with neurological derangement.

Conclusions: CANSE provides accurate assessment of ANS derangement in PD/MDA pts, useful to guide clinical and drugs management.

23.3 ELECTROCARDIOGRAPHIC RISK MARKERS IN RELATION TO INTRACORONARY BONE MARROW CELL THERAPY FOR ACUTE MYOCARDIAL INFARCTION

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Introduction: The data on ECG risk markers in relation to intracoronary bone marrow cell (BMC) therapy for acute ST-elevation AMI are limited.

Methods used: We evaluated whether intracoronary BMC therapy results in changes in ECG risk markers, and whether these risk markers are associated with the BMC therapy induced recovery of LVEF.

Results: LVEF changed 4.0 ± 11.2 % vs. -1.4 ± 10.2 % from baseline to 6 months in BMC ($n = 40$) vs. placebo ($n = 40$) treatment groups, respectively ($p = 0.03$), in the FINCELL study. BMC therapy had no statistically significant influence on any of the studied ECG risk markers. Baseline lower inferior J-point amplitude and lower inferior ST-segment deviation were statistically significantly associated with the improvement of LVEF in the BMC treatment group (Table).

	QRS	QTc	Inf. J-point amplitude	Inf. ST-segment deviation
ΔLVEF	$r = 0.15$ $p = 0.41$	$r = -0.10$ $p = 0.60$	$r = -0.39$ $p = 0.03$	$r = -0.42$ $p = 0.01$

Conclusions: Intracoronary BMC treatment has neutral effects on the ECG risk markers. Baseline lower inferior J-point amplitude and ST-segment deviation are associated with the improvement of LVEF in patients with ST-elevation AMI who receive intracoronary BMC therapy.

23.4 COMPARISON BETWEEN MODIFIED-MOVING AVERAGE AND SPECTRAL TWA METHODS DURING EXERCISE-ECG

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Introduction: T wave alternans (TWA) is an electrocardiographic index that reflects dispersion of repolarization often preceding arrhythmic events. The comparison between spectral and modified moving average (MMA)-TWA analysis during cardiac pacing, has showed a trend in the paired relationship. Our study is the first comparing MMA and spectral TWA during exercise ECG.

Methods used: We simultaneously assessed spectral and MMA-TWA during exercise-ECG in 47 patients affected by dilated cardiomyopathy (DC) (59.6 % post-ischemic and 40.4 %.idiopatic). Mean age of our study population was 58 ± 13.8 years old (83 % male): Mean EF % was 43.3 ± 9.4 %.

Results: The paired relationship between MMA and spectral TWA showed a lack of significance ($P = 0.8$). Mean MMA-TWA value did not significantly differ among patients with negative or non-negative spectral-TWA results ($P = 0.36$).

Conclusions: No correlation between exercise ECG spectral and MMA-TWA was observed in patients affected by DC, suggesting that these two methods possibly detect two different aspects of TWA. Further studies correlating results of exercise-ECG spectral and MMA-TWA to arrhythmic events are needed.

23.5 COST-EFFECTIVENESS OF T-WAVE ALTERNANS (TWA) IN THE PROGNOSTIC STRATIFICATION OF HEART FAILURE PATIENTS

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