**P-440** MODULATION OF AUTONOMIC ACTIVITY AND MORTALITY IN PATIENTS WITH CONGESTIVE HEART FAILURE

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We investigated the autonomic nervous system activity and its variation under different stimuli in patients with heart failure, by mean of heart rate variability (HRV). Moreover, we correlated this findings with the long-term mortality.

In a prospective study, we recruited 35 patients (31 males, 4 females) with a mean age of 54±12years, suffering for heart failure due to different heart diseases. All of them were submitted to HRV analysis, in time and frequency domain. This latter analysis was performed at rest, during paced breathing and during passive upright tilt. Time domain heart rate variability analysis, was obtained by mean of a 24-hour Holter monitoring, and the parameters calculated were: SDNN, SDNN index, RMSSD, pNN50.

Lower SDNN index (35±16 vs 62±55, p <0.05), characterized the 8 patients who died during a mean follow-up of 1179±136days. Paced breathing induced a significant reduction of LF and increase of HF in survivors. Moreover, in this group of subjects tilting induced a reduction of HF. The patients who died did not show significant variation of frequency domain indexes neither during controlled breathing nor during tilt (table).

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Tilt</th>
<th>p</th>
<th>Paced Breathing</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF, ms</td>
<td>60±127</td>
<td>47±28</td>
<td>NS</td>
<td>13±11</td>
</tr>
<tr>
<td>HF, ms</td>
<td>75±25</td>
<td>65±12</td>
<td>&lt;0.005</td>
<td>65.126</td>
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**Results:**
- SDNN index: Survival group < Non-survival group
- LF and HF: Increased during night time, decreased during day time.
- LF/HF ratio: Increased during night time, decreased during day time.
- TS: Increased during night time, decreased during day time.

**Conclusion:**
- LF and HF: Increased during night time, decreased during day time.
- LF/HF ratio: Increased during night time, decreased during day time.
- TS: Increased during night time, decreased during day time.

**P-441** HEART RATE TURBULENCE IN OBSTRUCTIVE SLEEP APNEA

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Heart rate turbulence (HRT) quantifies the biphasic response of the sinus node to ventricular premature complexes (VPCs) and is a powerful electrocardiogram related risk predictor in postinfarct patients. VPCs are frequent in patients with obstructive sleep apnea (OSA) compared to controls (11,3±7,6 vs 3,3±1,6, p=0,01). Abnormal values of both two parameters of turbulence were found in 28 pts (group A) and one of them in 31 ones (group B).

The patients who died during a mean follow-up of 1179±136days. Paced breathing induced a significant reduction of LF and increase of HF in survivors. Moreover, in this group of subjects tilting induced a reduction of HF. The patients who died did not show significant variation of frequency domain indexes neither during controlled breathing nor during tilt (table).

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**Results:**
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**Conclusion:**
- LF and HF: Increased during night time, decreased during day time.
- LF/HF ratio: Increased during night time, decreased during day time.
- TS: Increased during night time, decreased during day time.

**Material and methods:** We assessed 59 pts (55 males) in the age of 38-70 years with ischemic heart disease (IHD) and low left ventricular ejection fraction (EF) (below 40%). In all study pts the 24-hour ECG monitoring, echocardiogram and peak oxygen consumption (VO2max) assess were performed. In 24-hour ECG monitoring the evaluation of HRV in time domain were performed (using parameters: SDNN, SDNN-i, SDANN-i, rMSSD, pNN50) and also HRT parameters: turbulence onset (TO) and turbulence slope (TS) were calculated. The statistical analysis was performed using the Student’s t-test and the Pearson’s correlation coefficients (r).

**Results:**
- TO correlates: SDNN (r=-0.3, p=0.0007) and SDNN-i (r=0.6, p=0.00007).
- TS: Increased during night time, decreased during day time.
- LF and HF: Increased during night time, decreased during day time.
- LF/HF ratio: Increased during night time, decreased during day time.
- TS: Increased during night time, decreased during day time.

**Conclusion:**
- LF and HF: Increased during night time, decreased during day time.
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