Abstract: P124

Contribution of type 2 diabetes mellitus in deteriorate 24 hours ABPM vascular risk profile and ventricular function in patients with acute heart failure

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Topic(s):
Acute Heart Failure - Clinical

Citation:

Purpose:
Our aim was to evaluate a possible negative influence of the presence of Type 2 Diabetes mellitus (T2DM) on 24 h. ambulatory blood pressure monitoring (ABPM) pattern, vascular risk profile and severity of left ventricular (LV) function in patients with Acute Heart Failure (AHF).

Methods: In 184 patients with AHF we compare clinical features of 64 (65±9 years / 87,5% males) with T2DM versus 120 (63±11 years / 68,3% males) non-T2DM.

In addition to clinical examination and analytical parameters, all patients underwent a 24 h, ABPM and echocardiogram and evaluation of degree of severity LV Dysfunction.

Results:
Patients with T2DM had higher (p <0.001) prevalence (%) of Hypertension (75 vs 46.7), dyslipidemia (65.6 vs 28.3), obesity (47 vs 43), and worse renal function (fGe: 64.7 vs 72.3 ml/min/1.75m²). Etiology IC: Hypertensive and/or ischemic heart disease: 75% vs 60%. Mean Values of 24 h ABPM measurements are in table 1.

No significant differences in diastolic blood pressure (DBP) between groups, but patient with T2DM present higher average values (p <0.05) of SBP 24h (mmHg): 116/111); daytime (117/112) and nighttime (114/108); higher 24 h Pulse Pressure (50 vs 46mmHg) and non-dipper pattern frequency (84.7 vs 79.35), as well as a greater proportion of patients with moderate/severe LV dysfunction (87.6 vs 81.7%) (p <0 , 05).

We also observed worse NYHA functional class in T2DM patients: NYHA II-III 84,4 vs 58,3%, p< 0,001.

Conclusions:
In patients with AHF, the presence of T2DM contributes to show greater hypertensive and/or ischaemic ethiology, further deterioration of 24 h ABPM pattern and worse left ventricular myocardial function.

T2DM can be considered as a risk factor and worsening of heart failure. 24h ABPM may contribute to a better prognostic evaluation in these patients.

<table>
<thead>
<tr>
<th>Mean Values</th>
<th>T2DM</th>
<th>p</th>
<th>NonT2DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mmHg)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 SBP</td>
<td>116 ± 16</td>
<td>&lt;0.05</td>
<td>111±15</td>
</tr>
<tr>
<td>Daytime SBP</td>
<td>117 ± 15</td>
<td>&lt;0.05</td>
<td>112±15</td>
</tr>
<tr>
<td>Nighttime SBP</td>
<td>114 ± 18</td>
<td>&lt;0.04</td>
<td>108±16</td>
</tr>
</tbody>
</table>

SBP: Systolic blood pressure
DBP: Diastolic blood pressure
PP: Pulse pressure
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<table>
<thead>
<tr>
<th></th>
<th>T2DM</th>
<th>p</th>
<th>Non-T2DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>24h DBP</td>
<td>65 ± 7</td>
<td>ns</td>
<td>65±8</td>
</tr>
<tr>
<td>Daytime DBP</td>
<td>67 ± 8</td>
<td>ns</td>
<td>67±9</td>
</tr>
<tr>
<td>Nighttime DBP</td>
<td>64 ± 7</td>
<td>ns</td>
<td>69±9</td>
</tr>
<tr>
<td>Pulse Pressure</td>
<td>50 ± 13</td>
<td>0.05</td>
<td>46±11</td>
</tr>
<tr>
<td>Nocturnal PP</td>
<td>51 ± 15</td>
<td>0.05</td>
<td>47±12</td>
</tr>
</tbody>
</table>

SBP: Systolic blood pressure DBP: Diastolic blood pressure PP: Pulse pressure