Relationship between precipitant stressor and timing of clinical diagnosis in Tako-Tsubo Cardiomyopathy.

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Conclusion: We could find no systematic evidence for hypoglycemia playing a clinically important role in neurocardiogenic hypotensive syncope.

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Relationship Between Precipitant Stressor and Timing of Clinical Diagnosis in Tako-Tsubo Cardiomyopathy

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Introduction: In practice, TTC is diagnosed almost exclusively either via (i) emergency cardiac catheterisation, primarily for apparent “STEMI”, or (ii) recognition of a potentially precipitating stress, primarily in patients with a non-ST-elevation (N-STE) ECG pattern. We therefore hypothesized that the greatest delays in diagnosis would occur in the subgroup with N-STE and no known stressor. A seasonality analysis was also undertaken, to test a possible association between heat stress and TTC.

Results: Data for 48 consecutive index cases of TTC [96% female, mean age 66.4 ± 12 (SD) years] are summarized in the table. Notably, TTC was suspected prior to echocardiography/cardiac catheterisation in only six patients, in all of whom antecedent stressors were identified at presentation (2, p = 0.003). Neither initial LVEF nor initial N-terminal proBNP differed significantly between patients with and without prospectively suspected TTC. Five (10%) patients presented on days on which the maximum temperature was in the highest 2.5% annually, four of whom had no other identifiable stressor.

Conclusions: (1) Despite increasing awareness of TTC, this diagnosis is rarely entertained on initial assessment of patients. (2) In part, this reflects the relatively low proportion of TTC patients in whom severe stress is identified prospectively: such identification seems essential to prospective consideration of the diagnosis. (3) Despite reports of increased incidence of TTC in summer, potential heat stress is a relatively rare association of TTC. (4) Additional non-invasive biomarkers are needed to limit delays in diagnosis of TTC, especially in patients presenting without STE.
Retinal Microvascular Endothelial Function is Attenuated in Patients with Chronic and Acute Cardiovascular Disease


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Background: Advances in imaging technology have enabled real time assessment of retinal microvascular dilatation to flicker light; a nitric oxide dependent phenomenon. We sought to determine if retinal microvascular endothelial function was impaired in patients with chronic and acute cardiovascular disease by comparing dynamic retinal changes in healthy volunteers, stable patients with vascular risk factors (VRF) and patients with a recent acute coronary syndrome (ACS).

Methods: After pupil dilatation, retinal arteriolar and venular segments between half and two disc diameters from the margin of the optic disc were selected for measurement. Retinal vessel diameter changes in response to diffuse luminance flicker light were measured using the Digital Vessel Analyzer, and expressed as percentage change over baseline diameter. Data are expressed as adjusted mean ± SE.

Results: There were 137 subjects recruited. Stable patients with VRF and ACS were older than healthy volunteers, stable patients with vascular risk factors (VRF) and patients with a recent acute coronary syndrome (ACS).

<table>
<thead>
<tr>
<th></th>
<th>Healthy (n=59)</th>
<th>VRF (n=49)</th>
<th>ACS (n=29)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean ± SD</td>
<td>60 ± 9.5</td>
<td>62 ± 9.3</td>
<td>64 ± 7.9</td>
<td>0.03</td>
</tr>
<tr>
<td>Risk factor score</td>
<td>50.5 ± 11.9</td>
<td>53.1 ± 13.8</td>
<td>2.4 ± 1.4</td>
<td>0.01</td>
</tr>
<tr>
<td>Retinal arteriolar dilation (%)</td>
<td>2.2 ± 0.154</td>
<td>2.4 ± 0.126</td>
<td>1.0 ± 0.08</td>
<td>0.34</td>
</tr>
<tr>
<td>Retinal venular dilation (%)</td>
<td>5.2 ± 0.152</td>
<td>3.4 ± 0.124</td>
<td>4.08 ± 0.42</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Conclusion: Patients with VRF and ACS have a trend to attenuated retinal venular dilatation compared to healthy subjects. Further studies are needed to determine if retinal microvascular dysfunction in these patient groups may be an indicator of generalised vascular disease.

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