Factors Affecting Continued Nocturnal Non-Dipping in Blood Pressure in a PTSD Remitted Population

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Background

- Normal “dip” in blood pressure is at least 10%\(^1\)
- Absence of the dip in blood pressure is an established risk factor of hypertension and end-organ complications\(^2\)

http://www.abdn.ac.uk/medical/bhs/images/booklet/noctdip.gif
Strong correlation between symptoms of posttraumatic stress disorder (PTSD) and non-dipping of nocturnal blood pressure.

Interestingly, sustained non-dipping found even in the lifetime, or PTSD remitted group.

Cardiovascular risk factors hypothesized to contribute to “non-dipping”:
- Being overweight
- Living a sedentary lifestyle
- PTSD Hyperarousal symptoms
- Negative emotional responses to stressors (racism)
Objective

To evaluate factors contributing to continued nocturnal non-dipping in blood pressure in PTSD remitted participants.
Methods

- 30 healthy volunteers
- Between ages of 18 and 35, predominantly African-American
- 40% Males, 60% Females
Methods (continued)

• Surveys administered
  • Demographics Questionnaire
  • Clinical Assessed PTSD Scale (CAPS)
  • The International Physical Activity Questionnaire
  • Responses to Perceived Racism Scale

• Tabulations of each risk factor recorded
  • Body Mass Index
  • PTSD Hyperarousal symptom score
  • Physical activity level
  • Negative emotional responses to racism
Results

- 11 out of 30 were diagnosed as having sub-threshold or full criteria lifetime PTSD only
- 4 were dippers; 7 were non-dippers
Cardiovascular Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Dipper</th>
<th>Non-Dipper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Physical Activity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Either</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Number of Participants

- Overweight
- Low Physical Activity
- Either

Legend:
- Dipper
- Non-Dipper
Hyperarousal scores greater than zero

Moderate negative emotional response (NER) to stressors, such as racism

No real relationship between either one and dipping of nocturnal nondipping.
Discussion

- Potential relationship between being overweight or engaging in low physical activity and nocturnal non-dipping

- Preliminary data/study
  - Greater number of participants needed


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