INTRODUCTION

- Late-life depression (LLD) affects adults 60 years of age and older.
- LLD is associated with an increased risk of cardiovascular disease.
- Previous work has shown that this relationship may be mediated by autonomic dysfunction.
- This relationship is further complicated by antidepressant use which affects autonomic tone.

Aim of this study: To assess the effects of a category of meditation referred to as Automatic self-transcending meditation (ASTM) on measures of cardiovascular function.

METHODS

Study Design

- Single-centre, single-blind, longitudinal RCT comparing the effects of a 12-week augmentation program of ASTM vs. treatment-as-usual (TAU) on heart rate variability (HRV).

Participants

- Adults 60-85 years of age with an Axis I diagnosis of mild to moderate LLD, who were free of severe cardiovascular disease in the last 12 months.

Intervention

- Participants were randomly allocated to ASTM or TAU study arms.
- ASTM study arm: training was administered in group format by certified instructors from the Art of Living Foundation on 4 consecutive days (2hrs/day), followed by weekly 1hr follow up sessions for 11 subsequent weeks.

RESULTS

Preliminary findings from this ongoing study are presented below:

- Baseline demographics of participants in ASTM and TAU study arms are presented in Table 1.

- Paired t-tests confirmed a significant difference between low frequency HRV (a measure of combined sympathetic and parasympathetic tone) measured at baseline (Week 0) and post-intervention (Week 12) in the ASTM group only (Figure 1A)

- Differences in high frequency HRV (representative of parasympathetic tone) approached significance in the ASTM group, while differences for the TAU study arm were not significant (Figure 1B)

Table 1. Participant demographics expressed as mean ± S.D.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ASTM</th>
<th>TAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (yrs)</td>
<td>69.7 ± 7.4</td>
<td>66.9 ± 7.3</td>
</tr>
<tr>
<td>Women, No.</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Men, No.</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Age of onset of MDE (yrs)</td>
<td>51.7 ± 19.4</td>
<td>40.6 ± 24.8</td>
</tr>
<tr>
<td>Total MDE, No.</td>
<td>5.5 ± 10.4</td>
<td>8.5 ± 14.4</td>
</tr>
<tr>
<td>MMSE, score</td>
<td>28.5 ± 1.1</td>
<td>29.3 ± 1.5</td>
</tr>
<tr>
<td>CIRS-G, score</td>
<td>8.6 ± 3.1</td>
<td>7.6 ± 3.8</td>
</tr>
</tbody>
</table>

Abbreviations: MDE: Major Depressive Episode; MMSE: Mini Mental State Exam; CIRS-G: Cumulative Illness Rating Scale

Figure 1. HRV measured pre- and post-intervention in patients with LLD.

(A) Significant differences in low frequency HRV were observed in participants in the ASTM group (p < .05). No significant changes were observed in the TAU group (p = .72).

(B) Measurements of high frequency HRV showed differences in the ASTM group that approach significance (p = .051). HRV in the TAU group did not differ over time (n= 15; p = .57).

ERROR BARS = ± 1 S. E. M.

INTERPRETATION OF RESULTS & CONCLUSIONS

- Taken together, these preliminary findings suggest improvements in sympathetic and parasympathetic tone after a 12-week intervention of ASTM.
- Study is ongoing, target n = 96.
- Further analysis is required pending study completion however, current findings suggest overall improvements in cardiovascular health with ASTM practice and provide support for the implementation of ASTM training in routine clinical care.

ACKNOWLEDGEMENTS

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References