MEDIYOGA IN PAROXYSMAL ATRIAL FIBRILLATION

Effects in QoL, blood pressure and heart rate

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No conflict of interest to declare
Atrial fibrillation (AF) is the most common heart rhythm disturbance

Age, hyperthyreos and hypertension
Camm. A. et al. (2010). Europace

Poor QoL is common among subjects with AF
BACKGROUND

- Longer episodes of paroxysmal atrial fibrillation can be very unpleasant and interfere with the individual's social situation. McCabe, PJ. (2010). The journal of cardiovascular nursing

- Antithrombotic medication is improving the prognosis

- Other treatments as medications, cardioversion and ablation, is addressed to decrease symptoms
BACKGROUND

● Yoga has effects on both the parasympathetic and sympathetic nervous system
  Veerabhadrappa, SG. et Chinagudi, S. (2011). *Journal of Cardiovascular Disease Research*

● Blood pressure and heart rate decrease

● Improve QoL
  Howie-Esquivel, J. et al (2010). *Journal of Cardiac Failure*
● Developed from Kundalini yoga

● Sustaine deep breathing, light movements, meditation and relaxation

● The program is special made for persons with heart diseases and can be performed sitting in a chair
AIM

- Evaluate whether Mediyoga, in a prospective randomized controlled study, could improve the perceived QoL, blood pressure and heart rate in patients with paroxysmal AF
MATERIAL AND METHODS

● Inclusion criteria was a diagnosis of paroxysmal atrial fibrillation

● Exclusions criteria were multiple concurrent medical conditions and/or cognitive dysfunction and those who have difficulties to understand the Swedish language
Inclusion from Arrhythmia Unit 80 patients

Randomization at visit I

Forty patients to Mediyoga group

$n=33$

Droup-outs = 7

Forty patients to Control group

$n=36$

Droup-outs = 4
INTERVENTION

- Mediyoga for one hour, once a week for 12 weeks
- Deep breathing 5-10 minutes, followed by three movements, meditation and relaxation
- CD record for training at home
- Received standard treatment including medication, cardioversion and ablation
CONTROL GROUP

• Received standard treatment including medication, cardioversion and ablation

• Were instructed not to perform any yoga form
ASSESSMENTS

- QoL (SF-36 and EQ-5D) baseline and after 12 weeks
- Blood pressure and heart rate baseline and after 12 weeks
<table>
<thead>
<tr>
<th></th>
<th><strong>Mediyoga</strong></th>
<th><strong>Control group</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>64(±7)</td>
<td>63(±8)</td>
</tr>
<tr>
<td>Gender ( M/F)</td>
<td>17(51)/16(49)</td>
<td>26(72)/10(28)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>14 (42)</td>
<td>19 (52)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>0 (0)</td>
<td>3 (8)</td>
</tr>
<tr>
<td>Stroke/TIA</td>
<td>5 (15)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>AMI*</td>
<td>0 (0)</td>
<td>1 (3)</td>
</tr>
<tr>
<td>IHD**</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Heart failure</td>
<td>0 (0)</td>
<td>1 (3)</td>
</tr>
</tbody>
</table>

* Acute Myocardial Infarction ** Ischemic Heart Disease
### MEDICATIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Mediyoga group Baseline</th>
<th>Control group Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n=33$</td>
<td>$n=36$</td>
</tr>
<tr>
<td>Betablockerare</td>
<td>27 (82)</td>
<td>30 (83)</td>
</tr>
<tr>
<td>Antiaarrhythmica</td>
<td>13 (39)</td>
<td>21 (58)</td>
</tr>
<tr>
<td>Aspirin</td>
<td>10 (30)</td>
<td>12 (33)</td>
</tr>
<tr>
<td>ACE-inhibitors</td>
<td>9 (27)</td>
<td>15 (42)</td>
</tr>
<tr>
<td>Statin</td>
<td>9 (27)</td>
<td>14 (39)</td>
</tr>
<tr>
<td>Warfarin</td>
<td>18 (55)</td>
<td>20 (56)</td>
</tr>
<tr>
<td>Ca-antagonist</td>
<td>10 (30)</td>
<td>11 (31)</td>
</tr>
</tbody>
</table>

( ) = %
RESULTS
SF-36 PCS (PHYSIOLOGICAL STATE OF HEALTH)

- Mediyoga group n=33
  - Baseline: 46.7
  - After 12 weeks: 50.2 (p=0.09)

- Control group n=36
  - Baseline: 48.9
  - After 12 weeks: 52.2 (p=0.9)

Comparison between Mediyoga group and Control group after 12 weeks.
RESULTS
SF-36 MCS (MENTAL STATE OF HEALTH)

Mediyoga group n=33
Control group n=36

Baseline
After 12 weeks

42,1
50,6
p=0,001
52,9
52,7
p=0,8
RESULTS
EQ-5D (VAS - analog scale)

Baseline
After 12 weeks

Mediyoga group n=33
Control group n=36

$\begin{align*}
\text{Baseline} & : 70 \\
\text{After 12 weeks} & : 80 \\
\end{align*}$

$\begin{align*}
\text{Baseline} & : p=0.001 \\
\text{After 12 weeks} & : p=0.6 \\
\end{align*}$
RESULTS
SYSTOLIC BLOOD PRESSURE

Baseline
After 12 weeks

Mediyoga group n=33  Control group n=36

137 138
132
141
138
142

p=0.003

Baseline
After 12 weeks
RESULTS
DIASTOLIC BLOOD PRESSURE

<table>
<thead>
<tr>
<th>Baseline</th>
<th>After 12 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediyoga group n=33</td>
<td>Control group n=36</td>
</tr>
<tr>
<td>83</td>
<td>84</td>
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<tr>
<td>77</td>
<td>87</td>
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p = 0.007
RESULTS
HEART RATE

<table>
<thead>
<tr>
<th>Group</th>
<th>Baseline</th>
<th>After 12 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediyoga group n=33</td>
<td>64</td>
<td>65</td>
</tr>
<tr>
<td>Control group n=36</td>
<td>61</td>
<td>70</td>
</tr>
</tbody>
</table>

$p = 0.002$
CONCLUSION

- Mediyoga with easy movements and deep breathing leads to subjective improvement of quality of life, lower blood pressure and heart rate.

- These effects may be of importance that mediyoga can be a complementary treatment method for patients with paroxysmal atrial fibrillation.
Thank you for your attention!