Abstract: P630

Role of Indian yoga with pranayam prevent ventricular remodeling and reduce mortality rate according to LV ejection fraction in post PCI patients of STEMI.

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Topic(s):
Rehabilitation: Outcomes

Citation:

Background:
Coronary revascularization is fruitful management to relieve angina and reduce mortality as compare to medical management in significant coronary artery stenosis. Although measurement of left ventricular ejection fraction (LVEF) after acute myocardial infarction (MI) is a performance measure, little is known about the relationship between EF and post-discharge mortality among MI patients in contemporary clinical practice.

Objectives:
To assessment of mortality according to left ventricular ejection fraction and compare between yoga group and non yoga group, so that we can evaluate the importance of yoga and pranayam.

Methods:
2,470 patients (25 to 68 years of age) with STEMI were registered and managed with percutaneous coronary intervention at three centres from 2010 to 2012. Method was used to assess the association between left ventricular ejection fraction (LVEF) measured during the index hospitalization and 5-year mortality from date of registry. The relationship was examined with EF as a categorical variable, utilizing four clinically relevant categories (EF =34%, 35 to 45%, 46 to 54%, and =55%), and also with EF as a continuous variable. We divided two groups, group A was yoga with pranayam(n=1470) and group B was normal group(n=1000).

Results:
Among STEMI patients we found a graded inverse association between EF category and mortality. For patients relevant categories (EF =34%, 35 to 45%, 46 to 54%, and =55%) mortality after 5 years was assessed by 21%,14.3%,12.2% and 11% in yoga, pranayam group(p<0.004). For patients relevant categories (EF =34%, 35 to 45%, 46 to 54%, and =55%) mortality after 5 years was assessed by 25%,17.5%,14.4% and 13% in normal group(p<0.004). LVEF was increased in yoga & pranayam group by 11+/−3% versus 4+/−1% non yoga group.

Conclusion:
Yoga and Pranayam; breathing exercise may help to reduce metabolic stress, reduce oxygen demand and prevent ventricular remodeling. Low LVEF after STEMI remains an important risk factor for post-discharge mortality, even after extensive adjustment for patient and hospital characteristics. Routine yoga and pranayam; breathing exercise may reduce the mortality after myocardial infarction.
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<table>
<thead>
<tr>
<th>Ejection Fraction</th>
<th>5-Year Mortality Estimate</th>
<th>Hazard Ratio</th>
<th>95%Confidence Intervals</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 35% (n = 374)</td>
<td>21.0%</td>
<td>2.34</td>
<td>2.31-2.52</td>
<td>&lt;0.004</td>
</tr>
<tr>
<td>36% to 45% (n = 345)</td>
<td>14.3%</td>
<td>1.52</td>
<td>1.44-1.57</td>
<td>&lt;0.004</td>
</tr>
<tr>
<td>46 to 54% (n = 355)</td>
<td>12.2%</td>
<td>1.21</td>
<td>1.16-1.24</td>
<td>&lt;0.004</td>
</tr>
<tr>
<td>= 55% (n = 356)</td>
<td>11.0%</td>
<td>1.34</td>
<td>1.29-1.40</td>
<td>&lt;0.004</td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>= 35% (n = 189)</td>
<td>25.0%</td>
<td>2.54</td>
<td>2.42-2.63</td>
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<tr>
<td>36% to 45% (n = 224)</td>
<td>17.5%</td>
<td>1.45</td>
<td>1.39-1.48</td>
<td>&lt;0.004</td>
</tr>
<tr>
<td>46 to 54% (n = 333)</td>
<td>14.4%</td>
<td>1.25</td>
<td>1.18-1.28</td>
<td>&lt;0.004</td>
</tr>
<tr>
<td>= 55% (n = 254)</td>
<td>13.0%</td>
<td>1.27</td>
<td>1.23-1.34</td>
<td>&lt;0.004</td>
</tr>
</tbody>
</table>