Scapula Alata: A Physical Therapy Program and its Effectiveness measured by a Shoulder-Specifik Quality of Life measurement

Fysio- og ergoterapiafdelingen,
Glostrup Hospital
Fysioterapeut Janne M Gadsbøll
Scapula Alata / Winging Scapula
Background

- Multiple pathologies can lead to Scapula Alata
- Palsy of the Serratus Anterior Muscle
  Injury to the long thoracic nerve

Neuritis
- Infection, traction, compression
There are no evidence-based treatments to address scapula alata caused by injury of the long thoracic nerve.
Aim

• To describe a physical therapy program in patients with scapula alata

• To evaluate its effect using a shoulder-specific Quality of Life (QoL) measurement WORC (Western Ontario Rotator Cuff Index)
Method

In a case series, retrospective study, patients diagnosed with scapula alata, caused by injury to the long thoracic nerve, were successively referred as outpatients to a physical therapy program.
Material

• 22 patients (11 women)
• Median age 34 (quartile range 28 - 44) years
• Diagnosed with scapula alata caused by injury to the long thoracic nerve
• Included according to in-/exclusion criteria
Physical Therapy Program

The program included:

a. Physical examination (history, inspection, functional evaluation)
Right side scapula alata
Elevation to horizontal
Physical Therapy Program (continued)

b. Thoracic brace treatment (preventing scapular winging)
Thoracic Brace

back

front
Muscular rehabilitation (training of scapula awareness and retraction followed by scapula muscle control and stability)

The treatment frequency and duration were determined individually
Measurements

• The effect was evaluated by a shoulder-specific QoL questionnaire, the Western Ontario Rotator Cuff Index (WORC).

• The WORC is grouped in 5 domains: physical symptoms, sport/leisure time, work, life style and emotional health.

• The WORC scales range from 0 (no impact) to 100 (worst impact) for each item and for total score 0 (no impact) to 2100 (worst impact).
## Results

<table>
<thead>
<tr>
<th>Domains</th>
<th>Pre-test (n=22)</th>
<th>Post-test (n=22)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical symptoms</td>
<td>156 (115-297)</td>
<td>31 (18-78)</td>
<td>&lt; 0.001*</td>
</tr>
<tr>
<td>Sport / leisure time</td>
<td>242 (134-292)</td>
<td>40 (12-75)</td>
<td>&lt; 0.001*</td>
</tr>
<tr>
<td>Work</td>
<td>252 (178-307)</td>
<td>37 (6-69)</td>
<td>&lt; 0.001*</td>
</tr>
<tr>
<td>Life style</td>
<td>165 (31-224)</td>
<td>4 (0-31)</td>
<td>&lt; 0.001*</td>
</tr>
<tr>
<td>Emotional health</td>
<td>158 (63-218)</td>
<td>4 (0-11)</td>
<td>&lt; 0.001*</td>
</tr>
<tr>
<td>Total score</td>
<td>932 (617-1338)</td>
<td>159 (40-268)</td>
<td>&lt; 0.001*</td>
</tr>
</tbody>
</table>

Median (quartile range) is presented. *Significant level at p < 0.05.
1 year without treatment - 10 month with treatment

June 2007

April 2008
Before treatment
(October 2012)
After treatment
(September 2013)
Conclusion

• This study described in detail a physical therapy program
• The therapy program showed significant benefit
• Further research is needed before recommending the program as a potential treatment option
Publication

Tibaek, Sigrid and Gadsboell, Janne M

Scapula Alata: Description of a Physical Therapy Program and its Effectiveness measured by a Shoulder-Specific Quality of Life Measurement.

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