Head and neck lymphoedema management: A Brazilian retrospective experience

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Introduction

• Secondary lymphoedema after head and neck cancer treatment is a serious complication and its management can be a challenge.

• Although treatments for head and neck, upper-limb and lower-limb lymphoedema are based on complete decongestive therapy, the head and neck lymphoedema treatment is the most challenging of them, because of the anatomical and functional complexity of this region.

Introduction

Many aspects should be considered, including:
• Where to perform MLD
• How to apply compressive therapy
• What instruments to be used to assess the therapeutic monitoring
• The lack of consensus concerning the use of combined physical therapy modalities

Objective

To evaluate the effect of physical therapy on the management of head and neck lymphoedema by retrospective analysis
Methods

- The analysis of 32 medical records of patients with head and neck cancer
- Physiotherapy outpatient clinic of the Brazilian Institute of Cancer Control (IBCC, Sao Paulo – SP, Brazil)
- August 2008 to July 2010
- Research Ethics Committee of the IBCC (No. 177/2009/18)
Methods

Information collected from the medical records:

- Gender
- Age
- Habits
- BMI
- Diagnosis
- Medical treatment
- Lymphoedema classification
- Complaints
- Measurements of face and neck
- VAS for pain
- Physical therapy modalities
- Number of sessions
- Outcome

Medical records missing more than 3 of the variables were discarded
Methods

Statistical analysis:

- **Descriptive analysis**: age, BMI, number of sessions

- **Test for equality of two proportions**: gender, habits, diagnosis, medical treatment, complaints, lymphoedema classification, presence or absence of pain, physical therapy modalities and the outcome

- **Wilcoxon test**: was used to compare measurements of face, neck, and pain, both before and after the treatment

All tests were performed at a significance level of 5% (p≤0.05)
Results

Medical records (n=32)

Patients with lymphoedema
81% (n=26)

Discarted
23% (n=6)

Patients who remained (77%; n=20)

Male: 80% (n=16)
Mean age: 54.2±12 years
BMI: 22.1±3.6 kg/m²
Smoking: 65% (n=13) (p=0.058)
Alcoholics: 60% (n=12) (p=0.206)
Distribution of diagnosis and medical treatment:

<table>
<thead>
<tr>
<th>Cancer</th>
<th>n</th>
<th>%</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Cavity</td>
<td>8</td>
<td>40</td>
<td>&lt;0.008*</td>
</tr>
<tr>
<td>Larynx</td>
<td>5</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Farynx</td>
<td>4</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Lacrimal canaliculus</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Mandible</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Thyroid</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Radical unilateral</td>
<td>8</td>
<td>40</td>
<td>&lt;0.05*</td>
</tr>
<tr>
<td>Radical bilateral</td>
<td>6</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Modified unilateral</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Modified Bilateral</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>No dissection</td>
<td>3</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Neck Dissection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemotherapy</td>
<td></td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Radiotherapy</td>
<td></td>
<td></td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Results

All patients had complaints

- Pain (75%; n=15)
- Swelling (50%; n=10)  \( (p=0.102) \)

- ROM limitations (30%; n=6)
- Muscle weakness (15%; n=3)
- Paresthesia (10%; n=2)
Results

Lymphoedema classification

Stage I:
30% (n=6)  
p=0.057

Stage II:
60% (n=12)

Stage III:
10% (n=2)  
p<0.001

Physical Therapy Modalities

Test for equality of two proportions* p<0.05; NS: Not significant
Head and Neck Measurements

Wilcoxon Test (p<0.05)

The mean number of sessions was 23.9 ± 14.8, performed twice a week.
## Results

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Discharge</th>
<th>Treatment</th>
<th>Treatment Dropout</th>
<th>Disease complications</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>12</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>%</td>
<td>60%</td>
<td>25%</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Test for equality of two proportions (p<0.001)
Conclusion

Physical therapy combined with MLD, massage, facial and stretching exercises, patient education and compressive therapy reduced the secondary lymphoedema and pain intensity of head and neck cancer treatment.
References


Thank you!

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