Systematic Review of Clinical & Patient Reported Outcomes for Lymphedema in the Head & Neck Cancer Population

Ann Marie Flores¹, PT, PhD, CL; Bryan Spinelli², DPT; Mariesa Gonzalez³, BSHA, sDPT; Elyse Bloomfield³, sDPT

¹ Northeastern University, Dept. of Physical Therapy, Movement and Rehabilitation Sciences, Boston, MA; ² Good Shepherd Penn Partners, Dept. of Physical Therapy, Philadelphia, PA

Abstract

The purpose of this study is to systematically review and recommend patient reported (PRO) and clinical outcome measures of lymphedema in the head and neck cancer (HNC) population.

Methods & Data

Our systematic review is based on keywords and criteria provided by the EDGE Task force for HNC of the American Physical Therapy Association’s Oncology Section. We used the following keywords: lymphedema, head, neck, face, cancer, edema, radiation, radiotherapy, surgery, neck dissection, measurement, outcome, radiation/oncology, and inflammation. It was conducted using a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model to guide which articles are chosen for inclusion, determination of eligibility, screening and identification for the final review. Each PRO clinical measure selected for the review was identified using a 1-9 point scale with anchors of 0 (not highly recommended) and 9 (highly recommended), which is based on the APTA EDGE guidelines. At this time, senior reviewers (Flores & Spinelli) have begun the final inclusion review.

Conclusion & Clinical Implications

Assessment of which measures have enough evidence will aid in providing recommendations of outcome measures concerning lymphedema. This systematic review will be given based on provided physical therapists with evidence-based medicine for best outcome measures of lymphedema in the HNC patient population.

Purpose

To conduct a systematic review outcome measures for lymphedema for the head and neck cancer (HNC) patient population.

Background

- 4% of all US cancer survivors are HNC survivors
- <50% report disability
- 3-4% of all US cancer survivors are HNC survivors
- Radiation treatment to head, neck, face, cancer, edema, radiation, radiotherapy, surgery, neck dissection, measurement, outcome, radiation/oncology, and inflammation.

We use the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model to guide which articles are chosen for inclusion, determination of eligibility, screening and identification for the final review. Each PRO clinical measure selected for the review was identified using a 1-9 point scale with anchors of 0 (not highly recommended) and 9 (highly recommended), which is based on the APTA EDGE guidelines. At this time, senior reviewers (Flores & Spinelli) have begun the final inclusion review.

Conclusion & Clinical Implications

Assessment of which measures have enough evidence will aid in providing recommendations of outcome measures concerning lymphedema. This systematic review will be given based on provided physical therapists with evidence-based medicine for best outcome measures of lymphedema in the HNC patient population.

Methods & Data

Keywords used in all combinations:

- Cancer
- Edema
- Fibrosis
- Head & Neck
- Inflammation
- Lymphedema
- Lymphoedema
- Lymphoedema
- Lymphostasis
- Neck dissection
- Radiation Fibrosis
- Radiation
- Radiotherapy
- Reliability
- Surgery
- Validity

Literature search

Databases used: Pubmed/Medline, CAINHAL, PeDRO

Figures

**Figure 1: PRISMA Model**

<table>
<thead>
<tr>
<th>Records identified through database searching</th>
<th>Additional records identified through other sources: MEDLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 25,007)</td>
<td>(n = 12,360)</td>
</tr>
</tbody>
</table>

**Figure 2: APTA’s Oncology Section’s EDGE (Evaluation Database to Guide Effectiveness) Rating Form**

<table>
<thead>
<tr>
<th>Cancer EDGE Taskforce Outcome Measure Rating Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do not recommend: Poor psychometrics &amp;/or poor clinical utility (time, equipment, cost, etc.)</td>
</tr>
<tr>
<td>2B Unable to recommend at this time: There is sufficient information to support the recommendation of this outcome measure; the measure has been used in research in individuals with or post head and neck cancer</td>
</tr>
<tr>
<td>2A Unable to recommend at this time: There is insufficient information to support a recommendation of this outcome measure; the measure has been used in research in individuals with or post head and neck cancer</td>
</tr>
<tr>
<td>3. Recommend: The outcome measure has good psychometric properties and good clinical utility; no published evidence that the measure has been applied to research on individuals with or post head and neck cancer</td>
</tr>
<tr>
<td>4. Highly recommend: The outcome has excellent psychometric properties and clinical utility, the measure has been used in research on individuals with or post head and neck cancer</td>
</tr>
</tbody>
</table>

Selected References

5. Angst F, Schwyzer H, Aschlimann A, Simon BR, Goldberg H. Measures of adult shoulder function: Disabilities of the arm, shoulder, and hand questionnaire (DASH) and its short version (QuickDASH), shoulder pain and disability index (SPADI), american shoulder and elbow surgeons (ASES) society standardized shoulder assessment form, constant (murley) score (CS), simple shoulder test (SST), oxford shoulder score (OSS), shoulder disability questionnaire (SDQ), and western ontario shoulder instability index (WOSI). Arthritis Care & Research. 2011;63(S11):S174-S188.