Contrasting Two Prophylactic-Dysphagia Interventions for Patients with Head and Neck Cancer Treated with Radiotherapy with or without Adjunctive Chemotherapy

Maira L. Ambris
maira.ambris@umontana.edu

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Prophylactic Dysphagia Intervention for Patients with Head and Neck Cancer Undergoing RT/CRT

Undergraduate Researcher: Maira L. Ambris
Research Mentor: Laurie Slovarp PhD CCC-SLP

Introduction to Problem
- Head and neck cancer (HNC) is the 6th most common cancer worldwide.
- HNC is most commonly treated with radiation with or without adjunctive chemotherapy (RT/CRT).
- Dysphagia, including swallowing pain, is one of the most devastating side effects of RT/CRT.
- Prophylactic swallowing exercises (PSE) before and during RT/CRT have been shown to minimize dysphagia, but the most ideal exercise program is unknown.

Purpose
This study was designed to contrast a PSE program consisting solely of indirect swallowing exercises (exs. that do not require actual swallowing) (ID-PSE) with a more traditional PSE program that consists mostly of direct swallowing exercises (require swallowing) (D-PSE).

Participants
- 23 adults with primary cancer of the mouth, pharynx, or larynx treated with RT or CRT.
- ID-PSE group = 11
- D-PSE group = 12

Procedures
- Training phase: measure baseline function, instruct in PSE program
- Treatment phase: pt does swallow exs daily independently, data collected at RT 12-14, RT 23-25, and last day of RT
- Post-RT/CRT phase: data collection at 1 month and 3 months post RT/CRT

Outcome Measures
- Eating Assessment Tool – 20 (EAT-20)
- MD Anderson Dysphagia Inventory (MDADI)
- Functional Oral Intake Scale (FOIS)
- Study-specific 5-point scale for swallowing pain
- Log for tracking compliance

Indirect PSE Exercises (ID-PSE)
- Assisted Tongue Pull Back
- Shaker (Head Lift)
- Tongue ROM
- Jaw ROM
- Falsetto “ee”

Direct PSE Exercises (D-PSE)
- Effortful Swallow
- Masako (Tongue Hold) Swallow
- Mendelsohn Swallow

Research Questions & Hypotheses
#1: In patients undergoing RT/CRT for HNC, does a difference exist in compliance between patients treated with ID-PSE and similar patients treated with D-PSE?
- Hypothesis: Patients in the ID-PSE group will report better compliance to PSE exercises than patients in the D-PSE group.

#2: In patients undergoing RT/CRT for HNC, does a difference exist in swallowing function outcomes between patients completing ID-PSE and similar patients completing D-PSE?
- Hypothesis: Patients treated with ID-PSE will have better swallowing outcomes than patients treated with D-PSE (due to improved compliance).

#3: In patients undergoing RT/CRT for HNC, does a difference exist in swallowing pain for patients treated with ID-PSE and similar patients completing D-PSE?
- Hypothesis: Patients in the ID-PSE group will report less swallowing pain relative to patients in the D-PSE group.

Results
No significant between-group differences on any measures at baseline, treatment phase, or post-RT/CRT phase.

Conclusions
A PSE program consisting solely of indirect swallowing exercises may be just as effective as a program with primarily direct exercises. This has implications for patients who cannot do direct swallowing exs due to inability to swallow.

Limitations
- Small sample
- No no-treatment control group
- Asking about comfort level of exercises may have shown a preference of exercise program type

Select References