INTRODUCTION OF EXPIRATORY MUSCLE STRENGTH TRAINING (EMST)

FOR HEAD AND NECK CANCER PATIENTS WITH CHRONIC DYSPHAGIA/ASPIRATION FOLLOWING ONCOLOGICAL TREATMENT

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Introduction

EMST (Expiratory Muscle Strength Training) is a rehabilitation technique using a device to strengthen expiratory muscles, which are critical for breathing out forcefully, coughing, and swallowing.

The purpose of EMST is to improve cough strength, enhance swallowing muscle movement, and facilitate better laryngeal elevation during swallowing, thus reducing the risk of aspiration.

Limited evidence exists for EMST in head and neck cancer patients. A study by Hutcheson et al. (2018) suggested EMST as a promising therapeutic approach for improving airway protection in chronic aspirators post-radiation therapy.

Methodology

Participants: N = 4 radiation-associated aspirators (PAS score ≥ 6 on videofluoroscopy).

Intervention: 6 weeks of EMST (25 repetitions, 5 days/ week, at 75% load).

Adherence

N = 2 fully adhered to the program.
N = 2 partially adhered.

Primary Measure

Significant MEP improvement in N = 2 (full adherence).
No changes in N = 2 (partial adherence).

Secondary Measure

Self report tools such as the MDADI showed statistically significant changes in N = 1 with no significant changes in the other measures use (PSSHN) and (TOMS).

Qualitative Results

- "Reduced noise in my throat and I shared a bed with my wife for the first time in 18 months"
- "I have an improved ability to eat solid food"
- "I used to cough and cough now one strong cough shifts it"
- "I have the confidence that if something goes the wrong way I can clear it"

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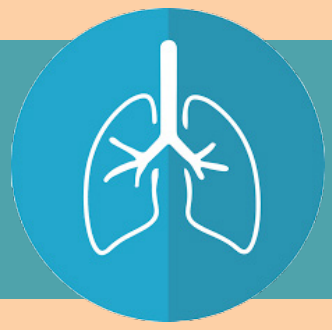
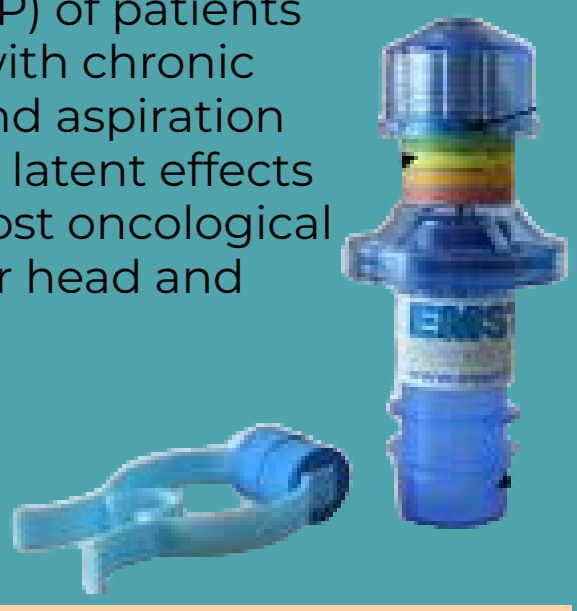


Aim

To increase the maximal pressure of the expiratory muscles (MEP) of patients presenting with chronic dysphagia and aspiration secondary to latent effects dysphagia post oncological treatment for head and neck cancer



Conclusion

EMST improved the MEP in a small group of head and neck cancer patients presenting with late effects dysphagia post radiation treatment who were fully compliant with the rehabilitation programme N =2.

Those who were fully compliant N=2 also saw a reduction in the impact of their dysphagia as rated by the MD Anderson Dysphagia Inventory (MDADI). However all those who took part N=4 reported improvement in functional ability and quality of life with real life examples.

N=4 decided to continue using the device, focusing on improving their MEP before moving on to a maintenance program.

Next Steps

- Continue to offer EMST for head and neck cancer patients with late effects dysphagia identified as chronic aspirators
- Encourage use of a log to improve compliance
- Offer support via face to face or telephone call week 3 to support compliance
- Further gather primary end point data (MEP), secondary data (MDADI) & qualitative feedback regarding functional impact