

Improving Swallowing Ability Using sEMG and Exercise



Dysphagia

Patient Information: Male, Age 77

Diagnosis: Parkinson's Disease / Oropharyngeal Dysphagia / Dementia

History: This gentleman was referred to Fresh River Healthcare for outpatient therapy due to a six month history of increased difficulty chewing food and having food remain in his mouth after swallowing. It often took him more than one hour to finish a single meal. He also complained of constant drooling, and his new dentures impacted his chewing and swallowing. Due to his difficulty eating he avoided hard foods such as raw carrots, nuts, and steak. Prior to this episode he was able to eat a regular diet.

Pre-Therapy Status:

- Clinical Swallow Assessment: Drooling, pocketing (food remaining in the cheeks), and residue in the mouth with intake of solids and liquids was observed.
- Instrumental Swallow Assessment: Modified Barium Swallow Study (MBSS) revealed liquids leaked out between the lips, solids pocketed in cheeks and remained without clearing, food remained in the mouth after the swallow, inefficient chewing, ineffective tongue movement to get the food out of his mouth, and required multiple swallow attempts per bite/sip.
- Time to eat a meal: Greater than one hour.

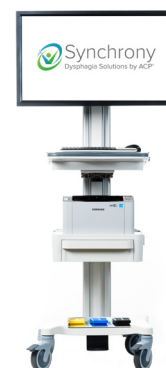
Therapy Information:

- Modality: OmnisEMG™ Biofeedback
- Frequency: 2x per week.
- Protocol Specifics: Typical and Effortful swallows were performed with sEMG biofeedback using line graph, bar graph, and kangaroo visualizations to improve coordination and pressure generation of the swallow. Jaw grading and straw suck against resistance exercises were completed using diver and line graph visualizations to improve lip seal and jaw force in order to reduce leakage of saliva and liquids and to improve efficiency of chewing foods.
- Duration: Eight weeks.
- Other Therapy Services Provided: Oral/pharyngeal muscle strengthening, oral care and patient/caregiver education.

Outcome:

- Clinical Swallow Assessment: No deficits noted; reduced anterior labial leakage of secretions, normal residue following the swallow, meal times are within functional limits, normalized tongue movements.
- Time to eat a meal: 30 minutes.

This gentleman and his wife are happy with the results of dysphagia therapy. His wife reports her husband is eating meals more quickly, often finishing before her! They are appreciative of the clinician's ability to provide education and expertise to improve swallowing function incorporating the Synchrony Dysphagia Solutions by ACP® program. This gentleman enjoyed using the virtual reality aspect of the treatment which helped him stay engaged in therapy.



OmnisEMG™ Biofeedback



Fresh River Healthcare

96 Prospect Hill Road, East Windsor, CT 06088 • (860) 623-9846

For information or placement inquiries, please contact our Admissions Coordinator