

Patient Information: Male, Age 89

Diagnosis: Dysphagia

History: This patient was admitted to the hospital with radial nerve impingement affecting his left side. His family also mentioned to the hospital doctors that a few months prior to the admission he was having difficulty swallowing, noted by coughing and feeling like his food was 'getting stuck' in his throat. Prior to this issue with swallowing, he consumed a general diet without any complaints or noted difficulty.

Pre-Therapy Status:

- Video Swallow Study: Significant oral-pharyngeal muscle weakness, consistent airway penetration with thin liquids, moderate pharyngeal residue requiring verbal cues for liquid wash and secondary swallow (food remaining in the throat after the swallow, requiring strategies for clearance).
- Clinical Signs: Positive signs of aspiration (30-40% during meals, noted by throat clearing and coughing).
- Diet: Mechanical soft solids, nectar-thick liquids.
- OMNI^sEMG™ (Surface Electromyography): Average typical swallow peak intensity, fatigue at 25 swallow repetitions with nectar-thick liquids.

Therapy Information:

- Modality/Equipment: Omnistim® FX² Portable, OMNI^sEMG™.
- Frequency: 3-4x per week.
- Protocol: PENS face and neck protocol.
 - OMNI^sEMG™: Weeks 1-3: Patient progressed to average effortful swallow peak intensity, fatigue at 35 repetitions with nectar-thick liquids.
 - Weeks 4-6: Patient progressed to average effortful swallow peak intensity, fatigue at 28 repetitions with honey-thick liquids.
 - Week 7: Patient progressed to average effortful swallow peak intensity, fatigue at 23 repetitions with pureed solids.
- Duration: Seven weeks.
- Other Therapy Services Provided: Oral motor and swallowing exercises.

Outcome:

- Video Swallow Study: Improvement in oral-pharyngeal muscle strength, demonstrated infrequent airway penetration with thin liquids (only twice throughout the study), mild pharyngeal residue which was cleared independently by patient using a secondary swallow.
- Clinical Signs and Symptoms: Minimal to no signs of aspiration during meals.
- Diet: General diet with regular solids and thin liquids.
- OMNI^sEMG™: Average effortful swallow peak intensity, fatigue at 23 swallow repetitions with pureed solids.

The patient felt like his swallow was much stronger by the end of therapy and he didn't feel like any food was getting stuck in his throat anymore. In particular, the Speech Language Pathologist (SLP) noticed that he was so much more confident during meals, compared to being very cautious and anxious while eating when he was first admitted.

After a month of using traditional swallow exercises the SLP initiated the OMNI^sEMG™ exercises and found that the patient really enjoyed getting the visual feedback from the system. He even began pointing out his own swallows on the monitor! She believes that the OMNI^sEMG™ provided clear objective information during the swallowing exercises, which allowed her to continually challenge the patient with various food/liquid consistencies and know exactly when to progress his treatment.



Omnistim® FX² Portable PENS



OMNI^sEMG™

