

# **Effect of Electric Stimulation on Swallow Function in Patient with Polymyositis: A Case Report.**

D'Souza K, Krieger R, Kobe C, Arch Phys Med Rehab. 2006;87(11):e14

## **Abstract**

**Setting:** Outpatient swallow center of freestanding rehabilitation hospital. Patient: A 62-year-old man with Polymyositis.

**Case Description:** Subject admitted to an acute care hospital with progressive weakness and dysphagia. Diagnosis of Polymyositis was made, and he was started on steroids and put on a liquid diet.

**Assessment/Results:** At the acute rehabilitation hospital, video fluoroscopic swallowing study (VFSS) showed inadequate laryngeal elevation without vestibule closure, and poor upper esophageal sphincter opening. A percutaneous endoscopic gastrostomy tube was inserted for enteral nutrition and the patient underwent swallowing therapy. Repeat VFSS at discharge showed no improvement in dysphagia. He then underwent ten 45-minute sessions of electric stimulation spread over 3 weeks. Each session involved placement of 4 electrodes over midline of the neck: 1 pair above and below the hyoid bone, with the other pair above and below the cricoid cartilage. Stimulation was then increased until the patient experienced a grabbing sensation. Stimulation was provided at this level for the 45-minute session while the patient simultaneously continued with swallowing exercises. Repeat VFSS at the end of this treatment protocol showed improved pharyngeal transit phase, with minimal to moderate pooling in the vallecula and piriform sinuses after the first swallow, and clearing with second and third swallows. The patient was upgraded to small bites of regular consistency solids, including bread, and sips of thin liquids. Discussion: Dysphagia has been reported in 30% of patients with chronic Polymyositis. Aspiration is a potentially life-threatening complication in these patients. Electric stimulation accounted for earlier and quicker recovery from dysphagia in this subject, narrowing the window period for aspiration.

**Conclusions:** Electric stimulation hastens recovery from dysphagia in patients with Polymyositis thereby reducing morbidity and mortality, and improving quality of life.