

Effect of Oral Motor Facilitation on Swallowing in Myasthenia Gravis: A Case Report

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Background

❖ Myasthenia gravis (MG) is a chronic autoimmune neuromuscular disease characterized by weakness of the skeletal muscles. Dysphagia is a common symptom in patients with MG, significantly affecting their quality of life. However, evidence on swallowing rehabilitation in MG remains limited.

Case Presentation

❖ A 74-year-old male with chronic kidney disease (stage 5) and gastric cancer visited the neurology department with left eye ptosis and dysphagia, which worsened in the afternoon but improved in the morning. Otolaryngological evaluation and brain MRI showed no abnormalities, but chest CT revealed a thymoma, leading to thymectomy. He was subsequently diagnosed with myasthenia gravis (MG) and started on pharmacological treatment.

❖ During hospitalization, a rehabilitation medicine consultation was requested for a swallowing assessment. The initial videofluoroscopic swallowing study (VFSS) revealed severely impaired oromotor function, allowing only small amounts of pureed food and liquids, while solid food intake was not possible. The patient exhibited aspiration corresponding to a score of 8 on the Penetration-Aspiration Scale (PAS), with silent aspiration due to an impaired cough reflex (Fig.1). Based on these findings, surgical intervention or 3–4 weeks of nutritional supplementation (total parenteral nutrition or tube feeding) followed by reassessment was recommended.

❖ The patient underwent dysphagia rehabilitation based on oral motor facilitation techniques (OMFT), a treatment designed to enhance oromotor function and swallowing ability without inducing significant muscle fatigue. To evaluate treatment effectiveness, oral-facial motor function and swallowing ability were assessed using COFFS and K-MASA, while tongue and lip strength were measured using the Intraoral Pressure Instrument. Dietary progression related to dysphagia improvement was analyzed via the American Speech-Language-Hearing Association National Outcome Measurement System (ASHA-NOMS).

❖ Following eight sessions of dysphagia rehabilitation therapy utilizing oral motor facilitation techniques, improvements were observed in orofacial function, tongue and lip strength, swallowing function, and dietary intake level (Table 1). A post-treatment VFSS indicated that while the previous diet (Swallowing Assistance Level 2) was maintained, therapeutic trials of a regular diet became feasible. However, multiple swallows were necessary to prevent aspiration due to significant residue (Fig.2). Alternative dietary options, including pureed foods, small portions of solid foods, and single-spoon liquid intake, were recommended. All food types showed improvement, with the PAS score improving to level 3.

Table 1. Outcome measurement of swallowing function

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	Start of training session	End of training session
MIP (ant, post)	2 / 4	30 / 23
Lip strength (Rt, Lt)	19 / 19	21 / 20
FDS	Oral phase	16
	Pharyngeal phase	38
PAS	8	3
COFFS	110	119
K-MASA	162	184
ASHA NOMS	1	4

MIP : maximum isometric tongue pressure

FDS : functional dysphagia scale

PAS : penetration-aspiration scale

COFFS : comprehensive oro-facial function scale

K-MASA : Korean mann assessment of swallowing ability

ASHA NOMS : American speech-language-hearing association national outcome measurement

System swallowing scale

Ant : anterior, post : posterior



Figure 1. Initial VFSS



Figure 2. Post-treatment VFSS

Conclusion

Myasthenia gravis (MG) is an autoimmune disorder causing neuromuscular transmission failure and muscle weakness, including swallowing-related muscles, leading to dysphagia. Rehabilitation must balance sensory stimulation and muscle strengthening while avoiding fatigue. This case report suggests OMFT-based dysphagia therapy may enhance orofacial strength and swallowing in MG, warranting further research.