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## Improvement of dysphagia and diet level by lowering nadir pressure of the upper esophageal sphincter: Case series

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**Statement of the Problem:** The manometry of upper esophageal sphincter has been used as a complementary measure for Video Fluoroscopic Swallowing Study (VFSS) as diagnostic assessment tools for oropharyngeal dysphagia with Cricopharyngeal Muscle Dysfunction (CPD). Previous studies focused on the resting (basal) pressure of Upper Esophageal Sphincter (UES) in manometry. However, the correlation between the declining resting pressure and improved dysphagia still remains unclear. Only a few number of reports suggest the nadir (residual) pressure as a possible determinant of esophageal clearance. We reported four cases in which the nadir pressure were decreased or increased after Botulinum Toxin (BTA) injections or pneumatic dilatations, trying to evaluate the value of a nadir pressure as an outcome predictor of dysphagia treatment.

**Method:** Four patients were included in this study, which had dysphagia including CPD. All were treated with dysphagia therapies during their hospitalization and treated with pneumatic dilatation or BTA injection. Manometry, VFSS and diet parameters were evaluated at the time of pre- and post-treatments of CPD, respectively.

**Findings:** There were no significant changes in basal pressures of UES between pre and post treatments in all. The nadir pressure of two patients was decreased and they consequently resulted in the improvement of swallowing function and diet level. One patient with nasopharyngeal cancer showed increased nadir pressure after treatments, resulting in no improvement of dysphagia. The nadir pressure of four patients did not exceed the upper normal limit from the beginning. However, further lowering of it was clinically helpful in swallowing function. There remains a possibility that even normal pressure level could lead to major dysfunctions for the patient which may weaken posterior propelling.

**Conclusion:** We suppose that the nadir pressure of UES augments the results of the video fluoroscopic swallowing test allows for a more complete assessment of the dysphagia patient.

## **Biography**

Eu Jeong Ko is a Clinical Fellow in Medicine, Department of Rehabilitation Medicine, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea. Her research interest is in swallowing dysfunctions and nutritional problems in patients with neuro rehabilitation.

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