

Swallowing Disorders

New Diagnostic Tool Helps Identify Swallowing Disorders in At-Risk Patients

The absence of laryngeal adductor reflex (LAR), as determined by using the Flexible Endoscopic Evaluation of Swallowing with Sensory Testing (FEESST) diagnostic tool, puts patients with dysphagia at a very high risk for problems such as laryngeal penetration and aspiration. There also appears to be a strong correlation between motor function deficits and hypopharyngeal sensory deficits.

These are the findings of a recently reported study on a new procedure that will help determine whether or not compromised patients can swallow safely.

The study, titled "Laryngopharyngeal Sensory Deficits As a Predictor of Aspiration," was conducted by researchers Michael Setzen, MD; Manderly A. Cohen, MS; Philip W. Perlman, MD; Kenneth F. Mattucci, MD; and Michael K. Ditkoff, MD, from Manhasset, NY.

Dr. Setzen presented the findings on Sept. 26 at the Annual Meeting/Oto Expo of the American Academy of Otolaryngology - Head and Neck Surgery Foundation in Washington, DC.

FEESST allows clinicians to more accurately and easily determine the potential for aspiration and penetration.

The use of FEESST allows clinicians to more accurately and easily determine the potential of a patient with dysphagia for aspiration and penetration, which can decrease the incidence of pneumonia caused by this deficiency, the researchers found.

Two tests that are traditionally used to assess swallowing ability are the modified barium swallow (MBS) and the fiberoptic endoscopic evaluation of swallowing (FEES).

Both are executed concurrent with the administration of food, thereby increasing the chances of aspiration, and neither provides direct evaluation of the sensory component of a swallow.

Therefore, the study authors stated, it would be beneficial for clinicians and patients to have a diagnostic test of swallowing that is done before food is administered and provides for direct assessment of the sensory component.

The research was conducted using FEESST.

This minimally invasive endoscopic technology assesses patients' ability to protect their airways.

This diagnostic tool directly assesses airway protection by endoscopically administering discrete pulses of air to the nerves in order to elicit LAR, transient vocal fold closure following stimulation.

The study demonstrated for the first time that patients who are unable to protect their airways as determined by FEESST are at risk for laryngeal penetration and aspiration on any given swallow, particularly with thin liquids.

Forty patients diagnosed with dysphagia were divided into two groups determined by the results of their FEESST test. Each group was comprised of 12 males and eight females.

The study group, with a mean age of 72.6, was determined to have absent LAR, which indicates severe sensory deficits on the diagnostic test.

The control group, with a mean age of 59.2, showed an intact LAR, indicating normal sensory sensitivity.

A comprehensive swallowing exam was performed on each patient. All were given a 5 cc bolus of thin liquid followed by a teaspoon of pureed food.

Laryngeal penetration - material that enters the laryngeal vestibule but does not go below the level of the vocal cords - was noted. Also noted was aspiration, which is material that goes below the level of the vocal cords into the trachea.

Statistical analysis was performed using the Fischer's exact test for differences in penetration or aspiration and differences in incidence of pharyngeal muscular weakness.

The study group indicated a 100 percent aspiration with thin liquids. With purees 85 percent penetrated, and 60 percent aspirated.

A muscular contraction impairment of 80 percent also was noted.

Comparatively, 5 percent of the control group experienced penetration and aspiration of liquid, with no penetration by the ingestion of purees.

In addition, the control group demonstrated a muscular contraction impairment of 20 percent.

For more information [please email us
info@michaelsetzen.com](mailto:info@michaelsetzen.com)