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Instrumental and Clinical Evaluation of Swallowing In the Analysis of a Choking Death

Aspiration of material into the lungs can lead to respiratory infection including aspiration pneumonia, which is often fatal, some studies indicate up to 70% mortality rate. Speech Language Pathologists (SLP) evaluate swallow function and provide treatment or recommend strategies, textures and consistencies to reduce risk for aspiration. The means of assessment and identification of aspiration risk can be instrumental or clinical.

As a forensic Speech Language Pathologist, it is not uncommon to review and opine on a lawsuit asserting that the treating SLP was negligent because they did not order an instrumental swallow evaluation called a video fluoroscopic swallow study (VFSS) sometimes referred to as a modified barium swallow test (MBS). In these lawsuits, the SLP working for either plaintiff or defendant is typically willing to testify that an VFSS is the "gold standard" and failure to order one is failure to meet standards of care, hence negligence.

A VFSS or MBS is an instrumental evaluation that provides a visual depiction of the swallow from a lateral point of view. The pharyngeal phase of the swallow can be visualized radiographically which is not possible in a clinical swallow evaluation. Pharyngeal function can be assessed by signs and symptoms in the clinical swallow evaluation, but not directly visualized.

The Clinical Swallow Evaluation, sometimes referred to as a "bedside" or "table side" swallow evaluation is a non-instrumental assessment. A clinical swallow evaluation is conducted by a pathologist and assesses swallow status via external signs and symptoms, physical structure examination, analysis of actual mealtime function over time, patient interviews and caregiver interviews. A thorough clinical evaluation is the standard of care as it includes the full spectrum of Pt status.

The very term "instrumental" lends a rather sexy connotation to the VFSS/MBS. Instrumental results are much more accurate than human judgment and data is the pinnacle of science in many TV programs. That is not always so in real life. There are limitations to VFSS/MBS that impact the wisdom of conducting instrumental evaluations:

- The use of barium dictates that limited trials are conducted, aspiration does not occur on every swallow, thus limiting the number of swallows can impact the results of the test.
- Patient posture in an instrumental examination is determined by the chair specific to the examination which needs be at a degree in which the swallow can be observed radiographically. That is also the posture that best facilitates a safe swallow and not necessarily reflective of the patient's daily dining experience.

Patient posture in a clinical swallow evaluation is dictated by the patient's habit, fatigue, table height, chair comfort, etc. All the variables that affect swallow safety on a daily basis for that patient.

- Swallow function at the end of a meal can produce a different result than at the start of a meal, as can eating a pork chop v scrambled eggs. Instrumental evaluations do not demonstrate swallow function for a whole meal and cannot assess the fatigued swallow, rate of presentation, size of presentation, ability to focus on the eating task or assess food items actually swallowed during meals.
- Patients with dementia have difficulty in new situations and may be so traumatized by the transportation to the hospital, lack of known caregivers and an unknown institutionalized environment that behaviors can occur leaving the patient unable to participate in the test.
- Food intermixed with barium is not appetizing, the test is not at mealtime nor is it in a dining environment thus the dementia patient may refuse to swallow the bolus necessary for the test.
- Patients with severe anxiety may not be able to tolerate the stress of the test or become traumatized by the concept of testing such that they cannot successfully participate.
- Medically compromised patients, even without dementia, can be too weak to tolerate transportation to the hospital, waiting at the hospital and the test itself.

It is my experience that many hospital pathologists conducting the VFSS/MBS will not make appointments for patients who cannot comprehend and tolerate all of the above, as the test will not be successful.

The American Speech Language and Hearing Association (ASHA) is the national body that certifies SLPs. ASHA provides us information on the benefits of VFSS/MBS which are many when appropriate and provides contraindications as well in the following publication: Videofluoroscopic Swallow Study (VFSS) (asha.org)

Contraindications to VFSSs include:

- Patient is unable to maintain adequate positioning.
- Patient's size and/or posture prevents adequate imaging or exceeds limit of positioning devices.
- Patient has an allergy to barium and/or other contrast media (e.g., iohexol).
- Patient does not demonstrate a swallow response.
- Patient has a fistula (e.g., tracheoesophageal fistula).
- Patient is too medically unstable to tolerate the procedure.
- Patient is unable to cooperate or participate in an instrumental examination.

The critical question when considering a VFSS or MBS is; will the outcome change the course of treatment? Historically, the VFSS/MBS was used to determine if the risk for aspiration of PO nutrition and hydration was significant enough to consider alternative nutrition and hydration (ANH) or tube feeding. Tube feeding has declined in use as the risks and benefits associated with tube feeding have become widely understood. Myriad

studies have concluded that tube feeding does not prevent aspiration or aspiration pneumonia in many circumstances and can introduce significant risk to the patient.

The instrumental eval would not change the course of treatment for many, if not most, long term care patients, thus is not appropriate in many circumstances. Megan M. Hamilton at Lios Manhe LLC can review your case and help determine if lack of an instrumental recommendation is, in fact, negligent.

There are dysphagic patients who do not evidence outward signs and symptoms of aspiration who may present with "silent aspiration." Silent aspiration should be considered when multiple pneumonias or respiratory infections occur. The VFSS/MBS is a means of confirming silent aspiration and is indicated when contraindications are ruled out.

There are unquestionably circumstances in which an instrumental evaluation specific to pharyngeal function is the best course of action, but it is not in all circumstances. In the absence of respiratory infections, signs and symptoms of aspiration or other clinical indications of dysphagia, an instrumental swallow evaluation is not indicated, thus not a standard of care.

The lack of instrumental evaluation does not in itself imply that standards of care were not met, the conscientious practitioner may best meet patient needs and standards of care via the clinical swallow evaluation. If your medical malpractice case includes aspiration or choking and the provision of speech language pathology, contact the experts at www.liosmanhe.com. hamilton@liosmanhe.com We can strongly influence the decision to settle or proceed.