The Role of the Speech-Language Pathologist in the Performance and Interpretation of Endoscopic Evaluation of Swallowing: Technical Report

ASHA Special Interest Division 13, Swallowing and Swallowing Disorders (Dysphagia) Committee on Endoscopic Evaluation of Swallowing

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About This Document

This technical report was developed by the American Speech-Language-Hearing Association (ASHA) Special Interest Division 13, Swallowing and Swallowing Disorders (Dysphagia) Committee on Endoscopic Evaluation of Swallowing. Members of the committee include: Susan Langmore (chair), Dee Adams Nikjeh, Paula Sullivan, Nancy Swigert, and Janet Brown (ASHA staff liaison). Celia Hooper, 2003–2005 vice president for professional practices in speech-language pathology, served as monitoring vice president.

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Background

This technical report was developed in support of the 2004 draft position statement *Role of the Speech-Language Pathologist in the Performance and Interpretation of Endoscopic Evaluation of Swallowing*. ASHA's previous 1999 position statement was a joint statement between ASHA and American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). When AAO-HNS requested that they be removed from the joint position statement in April 2003, ASHA developed a new position statement and this accompanying report.

Langmore, Schatz, and Olson (1988) are generally credited with the first published description of the procedure they termed Fiberoptic Endoscopic Evaluation of Swallowing (FEES). This is the common reference term for these procedures. Subsequently, many investigators have described variations on this procedure. However, these variations have not significantly changed the basic procedure used for the endoscopic assessment of swallowing function.

Fiberoptic Endoscopic Evaluation of Swallowing as Performed by Speech-Language Pathologists

Fiberoptic endoscopic evaluation of swallowing (FEES) as used by the speech-language pathologist is for the purpose of a functional evaluation of an individual's swallowing. The procedure is not intended to replace the fiberoptic examination performed by the otolaryngologist to assess the integrity of the laryngeal and pharyngeal structures. Physicians use endoscopy for functional evaluation of swallowing and/or to assess the integrity of the laryngeal and pharyngeal structures in order to render a medical diagnosis.

FEES is a comprehensive assessment of swallowing. It includes five components:

1. Observation of the anatomy involved in the oropharyngeal stage of swallowing,
2. Observation of the movement and sensation of critical structures within the hypopharynx,
3. Observation of secretions,
4. Direct assessment of swallowing function for food and liquid, and
5. Response to therapeutic maneuvers and interventions to improve the swallow.

The purpose of the procedure is the comprehensive functional evaluation of the oropharyngeal stage of swallowing, leading to recommendations regarding the adequacy of the swallow, the advisability of oral feeding, and the use of appropriate interventions to facilitate safe and efficient swallowing. In the process of this evaluation, if observations of structure or function of the larynx and pharynx suggest the possibility of an undiagnosed medical condition, they are described to the referring physician. The referring physician determines if further medical evaluation is warranted. The procedure is used with adults and children for these

evaluation purposes. Endoscopy may also be used in treatment as a therapeutic aid (e.g., to measure the effect of fatigue, to teach specific techniques, to educate patient/family) and to provide biofeedback to the individual with a swallowing disorder. For a more detailed description of the procedure, refer to “Knowledge and Skills for Speech-Language Pathologists Performing Endoscopic Assessment of Swallowing” (2002a).

Training and Competence

Speech-language pathologists performing FEES must undergo sufficient training to demonstrate the knowledge and skills needed to perform and interpret the procedure. Each speech-language pathologist is ethically responsible for achieving the appropriate level of training to provide these services competently. It is recommended that institutions develop a written list of competencies for performing FEES and that an individual's competencies be verified in writing and maintained on file. In some institutions, a credentialing or privileging process may be required. In some states, the use of endoscopy may be specifically addressed by the speech-language pathology licensure law.

According to ASHA's knowledge and skills document referenced above, the following process was recommended in order to acquire skill in performing FEES: 1) observation; 2) practice under direct supervision; and 3) independent practice with indirect supervision. Required knowledge and skills areas were described as:

1. Know normal and abnormal aerodigestive physiology for respiration, airway protection, and swallow.
2. Recognize anatomical landmarks as viewed endoscopically.
3. Recognize altered anatomy as it relates to swallowing function.
4. Recognize changes in anatomy and physiology of the swallow over the life span.
5. Identify the indications and contraindications for an endoscopic exam.
6. Identify the elements of a comprehensive endoscopic swallowing exam.
7. Detect and interpret abnormal findings in terms of the underlying anatomy and pathophysiology.
8. Apply appropriate treatment interventions, implement postural changes, and alter the bolus or method of delivery to determine the effect on the swallow.
9. Use the results of the examination to make appropriate recommendations and to guide treatment of the patient.
10. Make appropriate recommendations or referrals for other examinations as needed.
11. Know when to re-evaluate swallowing function.
12. Use endoscopy as a biofeedback tool and to educate patients, family, and staff using the endoscopic images either during or after the examination.

Skills

1. Operate, maintain, and disinfect the equipment needed for an endoscopic examination.
2. Apply topical anesthetic when clinically appropriate and permitted by the licensing regulations of individual states.
3. Insert and manipulate the endoscope in a manner that causes minimal discomfort and prevents unpleasant complications.
4. Manipulate the endoscope within the hypopharynx to obtain the desired view.
5. Direct the patient through appropriate tasks and maneuvers as required for a complete and comprehensive examination.

6. Interpret and document findings in a written report.
7. Formulate treatment and management strategies based on test results.

ASHA Policy Documents on FEES

ASHA's policy documents reflect the history and extent of SLPs' role in instrumental assessment of swallowing.

- ASHA's Scope of Practice includes “using instrumentation (e.g., videofluoroscopy, EMG, nasendoscopy, stroboscopy, computer technology) to observe, collect data, and measure parameters of communication and swallowing, or other upper aerodigestive functions in accordance with the principles of evidence-based practice” (ASHA, 2001).
- 1991 position statement and guidelines “Instrumental Diagnostic Procedures for Swallowing,” addressed fiberoptic endoscopic evaluation of swallowing, videofluoroscopy, ultrasonography, and manofluorography. The document states that “It [the endoscopic swallowing procedure] is not intended to replace the fiberoptic examination performed by the otolaryngologist to assess the integrity of the laryngeal and pharyngeal structures, or the procedures performed by the speech-language pathologist to assess voice.” Specific knowledge and skills needed to perform the procedure were outlined in the document (ASHA, 1992).
- 2002 position statement “Roles of Speech- Language Pathologists in Swallowing and Feeding Disorders” (ASHA, 2002b) acknowledges the educational and clinical background that prepares speech-language pathologists to assume a variety of roles, and indicated that one of those roles is “performing instrumental assessments that delineate structures and dynamic functions of swallowing.”
- 2002 “Knowledge and Skills for Speech- Language Pathologists Performing Endoscopic Assessment of Swallowing” described the endoscopic procedure as one that allows inspection of functions of the swallowing mechanism at the velopharynx, oropharynx, pharynx, and larynx, but not a systematic evaluation of oral or esophageal components of swallowing. Skills needed to handle an endoscope safely and effectively as well as knowledge and skills related to understanding dysphagia were discussed, and a suggested training curriculum to attain both types of skills was outlined (ASHA, 2002a).

Other Publications on FEES

SLPs have been primary contributors to published research on the use of fiberoptic endoscopy to evaluate swallowing. Langmore's book *Endoscopic Evaluation and Treatment of Swallowing Disorders* (2001) discusses the use of the procedure to assess and manage a wide range of disorders and patient populations. Recent articles by Langmore (2003), Hiss and Postma (2003), Colodny (2002), Leder, Joe, Hill, and Traube (2001), and Leder and Espinosa (2002) are examples of research by SLPs in peer-reviewed journals about: 1) the efficacy of the procedure; 2) outcomes of treatment after using FEES as the diagnostic tool; and 3) use of FEES to rate swallow parameters. Recent publications by physicians reflect collaborations with SLPs or studies based on FEES performed by SLPs (e.g., Donzelli, Brady, Wesling, & Craney [2001], Ajemian, Nirmul, Anderson, Zirlen, & Kwasnik [2001]; Leder, [2002]; and Lim et al., [2001]).

Joint Position Statement on FEES

In 1999, the American Academy of Otolaryngology- Head and Neck Surgery and the American Speech- Language-Hearing Association approved the joint position statement "Role of the Speech-Language Pathologist and Otolaryngologist in Performance and Interpretation of Endoscopic Examinations of Swallowing" (ASHA, 2000). In it, the distinction between the role of the physician in rendering medical diagnoses and that of the SLP in evaluating swallowing function was clearly delineated. This statement was as follows:

"It is the position of the American Speech-Language-Hearing Association and the American Academy of Otolaryngology-Head and Neck Surgery that fiberoptic endoscopy is an imaging procedure that may be utilized by speech-language pathologists, otolaryngologists, and other qualified health care providers to evaluate velopharyngeal, phonatory, and swallowing functions in adults and children. Physicians are the only professionals qualified and licensed to render medical diagnoses related to the identification of pathology affecting swallowing functions. Consequently, when used for medical diagnostic purposes, fiberoptic endoscopic examinations should be viewed and interpreted by an otolaryngologist or other physician with training in this procedure. **The assessment and management of dysphagia falls within the scope of practice of speech-language pathology. Speech-language pathologists with expertise in dysphagia and specialized training in fiberoptic endoscopy are professionals qualified to use this procedure for the purpose of assessing swallowing function and related functions of structures within the upper aerodigestive tract** [boldface added]. Fiberoptic endoscopy may also be utilized as a therapeutic aid and biofeedback tool during the conduct of swallowing treatment. Care should be taken to use this examination only in settings that assure patient safety."

Effective April 21, 2003, the American Academy of Otolaryngology-Head and Neck Surgery requested that the Academy's name be removed from the Joint Position Statement (1999) "Role of the Speech-Language Pathologist and Otolaryngologist in Performance and Interpretation of Endoscopic Examinations of Swallowing" (ASHA, 2000). That action prompted the development of this technical report and accompanying "Role of the Speech-Language Pathologist Performance and Interpretation of Endoscopic Assessment of Swallowing: Position Statement."

Safety of the Procedure

Two questions about safety have been raised in regard to SLPs performing FEES: 1) the direct safety and comfort to the patient when passing the endoscope through the nares and manipulating it within the hypopharynx; and 2) the possibility that a serious medical problem may be missed if an SLP performs the procedure independently.

1. Several reports of surveys have been published that looked at the incidence of adverse effects of the procedure in both adults and children (Aviv et al., 2000; Aviv, Kaplan, and Langmore, 2001; Cohen et al., 2003). In all studies of adverse effects, the incidence has been very low, generally less than 1%. All problems were mild and none resulted in serious consequences. Serious complications ensuing from endoscopic examinations, such as laryngospasm and pharyngeal mucosal injury, have only been reported when this procedure is used by physicians for intubation, where the vocal folds are traversed, or

when the examination is performed emergently (Aviv et al., 2001). FEES is a less invasive procedure, and complications are less serious, (e.g., patient discomfort, epistaxis, vasovagal response).

Historically, otolaryngologists have used topical anesthesia and decongestants to maximize comfort of the patient when inserting the endoscope. If a speech-language pathologist performs the examination independently, the administration of these medications, if used at all, must be approved in writing by the institution. Because of the risk of anesthetizing the pharyngeal and laryngeal mucosa and compromising the swallow, many clinicians perform FEES with either no anesthesia or only a small amount in the nares. Some studies have reported that the use of anesthesia does not change the comfort level of the patient undergoing flexible laryngoscopy (Leder, Ross, Briskin, and Sasaki, 1997).

2. The other area of concern with regard to safety is the possibility that a serious medical condition may be missed if a speech-language pathologist performs the procedure independently. This concern is addressed by emphasizing that the purpose of the FEES procedure is solely to address swallow function, not to make a medical diagnosis. The physician refers for FEES if a swallowing problem is suspected or needs further assessment. If there are clinical indications for a laryngoscopy evaluation (e.g., hoarse voice, pain on swallowing, etc.), the physician should make a referral to an otolaryngologist to rule out the possibility of disease in the nasal, pharyngeal, or laryngeal region. This separate examination is *not* a FEES procedure. It should be noted that the early signs of cancer in the larynx would almost certainly be missed if videofluoroscopy had been performed to evaluate swallowing rather than endoscopy. This is because early tissue changes (e.g., color and texture) cannot be visualized fluoroscopically.

In summary, ASHA affirms the role of the speech-language pathologist in performing FEES independently to evaluate swallowing function, and distinguishes it from that of physicians, who use endoscopy to assess the integrity of the laryngeal and pharyngeal structures in order to render a medical diagnosis.

Terminology

Epistaxis: Bleeding from the nose

Vasovagal: Fainting; abnormally slow pulse and fall in blood pressure due to vagus nerve stimulation.

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