FEES EXAMINATION PROTOCOL

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Part 1. ANATOMIC-PHYSIOLOGIC ASSESSMENT

A. Velopharyngeal Closure

Task: Say “ee”, “pa-pa-pa”, other oral sounds
Task: Dry swallow
Optional task: Swallow liquids and look for nasal leakage

B. Appearance of Pharynx and Larynx at Rest/ Anatomy

Scan around entire HP to note symmetry and abnormalities that impact swallowing and might require referral to otolaryngology or other specialty.
Optional task: Hold your breath’ blow out cheeks forcefully (view piriform sinuses)

C. Secretions; Handling of Secretions

Observe amount, location of secretions, and patient response over a period of about 2 minutes. Use Murray Secretion scale to score this.
Count frequency of spontaneous swallows; if no spontaneous swallows, ask patient to swallow
Go to Ice Chip Protocol if secretions in laryngeal vestibule and inability to swallow saliva successfully.

D. Base of Tongue retraction

Task: Say “earl, ball, call” or other post-vocalic - ‘l’ words

E Laryngeal Function

1. Respiration

Observe larynx during rest breathing (respiratory rate; adduction/abduction)
Tasks: Sniff, pant, or alternate “ee” with light inhalation (assess mobility of adduction/abduction and adequacy of airway opening)

2. Phonation (VF mobility)

Task: Hold “ee”
Task: Repeat “hee-hee-hee” 5-7 times (symmetry, precision)

3. Airway Protection (glottic closure; airway closure)

Task: Hold your breath lightly (true vocal folds); hold tight (false vocal folds)
Task: Hold your breath to the count of 7 (can maintain glottic closure?)
Optional: Cough, clear throat

4. Laryngeal Elevation (optional task)

Glide upward in pitch from low to as high as possible; hold it at the high note for a few seconds Perform with low view to view arytenoids lifting and again in home position to view pharyngeal walls at time of effort.

F. Pharyngeal Wall Medialization/ Squeeze (optional task)

Task: Tighten throat muscles and screech; hold out a high pitched, strained 'ee' for about 3 seconds. (Also see laryngeal elevation task)

G. Sensory Testing (optional)

Note response to presence of scope

Touch Test: Lightly touch arytenoids at the juncture of the arytenoid and aryepiglottic folds; response is variable; should be LAR or patient response.

**Note: Formal testing can be deferred until the end of the examination.

Part 2. SWALLOWING FOOD & LIQUID. All foods / liquids dyed green with food coloring. White food color is added to all liquids for best visualization

Consistencies and bolus volumes will vary depending on patient needs and problems observed. Begin with easiest consistency and small volume; increase volume as outlined below. Continue with more difficult consistencies

Suggested consistencies

Ice chips – usually 1/3 to 1/2 teaspoon, dyed green; see below
Thin liquids – water, milk. Dye the liquid green plus add white food color to maximize visualization of aspiration. If no white food color available, milk is recommended.
Thick liquids – nectar or honey consistency; milkshakes (light color)
Puree – blended food
Semi-solid food – potato, banana, pasta, etc
Soft solid food (requires some chewing) – bread & cheese, soft cookie, casserole, meat loaf, cooked vegetables, most fish
Hard, chewy, crunchy food – meat, raw fruit, green salad
Mixed consistencies – apple, fruit cocktail

Amounts / Volumes/ Bolus Sizes

If measured bolus sizes are given, a rule of thumb that applies to many patients is to increase the bolus size with each presentation until penetration or aspiration is seen. When that occurs, repeat the same bolus size to determine if this pattern is consistent. If aspiration occurs twice, do not continue with that bolus amount…or try a compensatory strategy to determine its effect. The following progression of bolus volumes is suggested.

< 5 ml - only if patient is medically fragile or pulmonary clearance is poor
5 ml (1 teaspoon)
15 ml (1 tablespoon) -
Single swallow from cup or straw – self-presented
Consecutive swallows – self-presented

Suggest that examination end with patient eating/drinking freely

The FEES Ice Chip Protocol - For severe dysphagia or nil per oral status

Part I: Emphasize anatomy, secretions, laryngeal mobility,airway closure, observations of sensation**-** Note spontaneous swallows, ability to swallow on cue

Part II: Deliver ice chips **-** Note ability to stimulate swallowing, effect on secretions, reaction to aspiration. (It may take 5-6 swallows to have an effect)

Part 3. THERAPEUTIC INTERVENTIONS

Compensatory interventions are intermixed with Part 2 and are trialed as soon as appropriate. Postural, bolus modifications, behavioral changes (eg. wash residue with liquid) are trialed. An effective breath-hold that seals the glottis can be taught. Biofeedback is highly recommended. Most often, skill training and new exercises are deferred to a treatment session because of the time needed to teach these.