Assessment of Dysphagia
Bedside/clinical evaluation

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Learning Objectives

• Recognize the importance of thorough Dysphagia assessment
• Determine components of beneficial dysphagia assessment protocol
• Performing the presented protocol of assessment
• Analyze findings during examination
Definition of Dysphagia

Difficulty in moving food from the mouth to the stomach.

The definition should include, behavioural, sensory motor acts, cognitive awareness and visual recognition of food.

**Functional definition.** Interruption in either the eating pleasure or the maintenance of nutrition and hydration.

Dysphagia

- Disease or symptom?

- Swallowing impairments are usually classified according to:
  - Phase affected (design intervention)
  - Underlying etiology (prognosis)
  - Severity of the disorder (monitoring of aspiration)
Why is it difficult to diagnose dysphagia?

- Lack of education on the prevalence and causes of the disorder
- Inadequate training on screening, diagnosis and referral process.
- Confusion between normal variations in swallowing and dysphagia
- Unwilling of the patients to report problems

Why are the patients unwilling to report problems?

- Unaware of the sign
- Dismiss their symptoms
- Accept as normal part of aging
- Unaware of safe swallowing strategies
- Unaware of potential risks

What are the goals of Dysphagia assessment protocol?

- Determine the presence or absence of dysphagia
- Assess severity
- Make recommendations
- Design an individual rehabilitation regimen
- Share information with the interdisciplinary swallowing team
What is the ideal Protocol?

- Simple and easy
- Patient based and clinician based
- Detailed objective data collection
- Physiological natural descriptions
- Refer to associated Communication disorders
- Assist intervention planning
- Assist monitoring of progress

Why is screening important?

1. Indicate the likelihood of the presence or absence of Dysphagia
2. Identifies patients require referral for comprehensive evaluation

- Do not indicate the nature of disease or severity and should not be used to design intervention
Bedside Swallowing Evaluation

- Useful screening tool
- The first step in a complete assessment of a patient with dysphagia.
  - Good indicator of oral function.
  - Good indicator of language abilities of the patient.
  - Good indicator of the behavioral control needed for eating
  - Good indicator of the ability to remember and follow directions.

- Not diagnostic
- Unreliable in defining pharyngeal motor control because of limited visualization

Why do we need instrumentation?

- Quantify the swallowing problems
- Clinical bedside findings are inconsistent with reported signs and symptoms of dysphagia
- Assist medical diagnosis
- Safety and efficiency of swallow require confirmation
- Design and implement a treatment plan
Development Of Assessment Protocol For Dysphagic Patients

A Thesis submitted to the faculty of medicine
University of Alexandria
Master of Phoniatrics
By
Moataz Mahmoud Elzayat
MD Sudan
2011

Dysphagia assessment at Unit of Phoniatrics Alexandria University

I. Screening:
   ▫ Questionnaire(*)

II. Clinical examination:
   ▫ Prefeeding assessment(*)
   ▫ Initial swallowing examination
   ▫ Observation during trial swallows
   ▫ Observation of eating

III. Instrumental examination(*)
Basic Components of Dysphagia Assessment

1. Screening: (appendix A)

Patients were asked to complete questionnaire (appendix A) to identify signs and symptoms of dysphagia.

2. Clinical Examination:
   a. Prefeeding assessment (appendix B)
   b. Initial swallowing examination: (mark if present)
      - Reduced alertness
      - Absent swallow
      - Absent productive cough
      - Difficulty handling secretion
      - Pharyngeal and laryngeal movement
   c. Observation during trial swallows: (mark if present)
      In this examination we give the patient to drink 3oz (90 ml) of water without interruption while seated in an upright position, following which observation were made for:
      - Inability to complete the task
      - Coughing
      - Choking
      - Dysphonia (wet- hoarse) vocal quality exhibited either during or within 1 min of test completion.
   d. Observation of eating:
      - Reaction to food/self-feeding skills
      - Oral movements in chewing
      - Coughing, clearing throat or struggle behaviors
      - Changes in breathing, secretion levels through meal
      - Duration of meal and total intake
      - Co-ordination of breathing and swallowing.

3- Instrumental Examination:
   3.a Non-imaging procedure:
      3.a.1 EGG (electroglottography)
      3.a.2 Cervical auscultation
      Comments on the following sounds heard:
      - Cervical swallowing sound (click-clunk)
      - Flushing sounds of material
      - Wet breath sound
   3.b Imaging Procedure:
      Videoendoscopy FEES (fiberoptic endoscopic evaluation of swallowing): (appendix D)
      3.b.1 Aantomic-physiologic observation.
      3.b.2 Delivery of food & liquids.
      3.b.3 Therapeutic maneuvers.
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FEES Scoring Protocol (Modified after Langmore, 1998) Appendix B

Patient Name __________________________ Date __________________________ Examiner ____________________ Ref. __________

I. Anatomic-Physiologic Assessment:

A. Velopharyngeal closure

Oral-nasal sound competence
Dry swallow competence
Lateral pharyngeal wall symmetry_____________________

B. Appearance of HP and larynx at rest:

Normal __________ Abnormal ________ Asymmetry ________

Involuntary movement at rest ______

C. Secretions and Swallow Frequency: Status of standing secretions in HP

0. Normal (moist) ______

1. Pooling in valleculae/pyriforms ______

2. Pooling in laryngeal vestibule consistently ______

3. Pooling in laryngeal vestibule transiently ______

Frequency of spontaneous swallows (minimum=1/min.) ______

D. Base of Tongue and pharyngeal muscles:

Symmetry ______

Range/amplitude ______

E. Respiration (Abduction):

Normal ______ Abnormal ______

F. Phonation:

Normal ______ Abnormal ______ Asymmetric ______

Hyperadduction ______ Glottic gap ______

G. Airway Closure:

Normal ______ Abnormal ______

H. Sensory Testing: note response to presence of scope ______
Part II. Ability to Swallow Food and Liquid: (see also appendix c)

- Mark the most common or problematic point of spillage:
  - Outside larynx
  - On rim of larynx
  - Within larynx

- Adequacy of bolus clearance:
  - Normal
  - Abnormal
  - Comments

- Bolus consistencies
  - Normal
  - Abnormal
  - Comments

  A. Oral preparatory stage:
     - Mastication: adequate
     - Inadequate

  B. Oral preparatory time
     - Liquids (normal range = 0.5 - 2 sec.)
     - Food (normal range = 4 - 14 sec.)
     - (Palmer et al., 1992; Dua et al., 1997)

  C. Timing of bolus flow and initiation of swallow
     - Scoring the delay (if measured bolus volumes are given with instructions to swallow)
     - Measured pharyngeal delay = __________ sec.

  D. Adequacy of structural movement during the swallow
     - Normal
     - Abnormal
     - Comments

  E. Penetration or Aspiration during the swallow (visualized before/after whiteout)
     - Score (from 1 - 9)

  F. Observation after the swallow and between swallows:
     - Amount of residue: None/Small
     - Medium
     - Large

Appendix D (cont.)

- Location of residue:
  - Outside larynx
  - On rim of larynx
  - In larynx

- Aspiration after the swallow: Immediate
  - Delayed

Part III. Therapeutic Maneuver Tried and Their Effect

- Safe bolus consistencies
  - Mode of delivery

- Note appropriate strategies used for the observed problem:
  - Head turn
  - Chin tuck
  - Effortful swallow
  - Supraglottic swallow
  - Mendelsohn maneuver
  - Others
53 years old, female patient (post glomus vagale excision) difficulty swallowing solid food & choking.
22 years old, female patient, difficulty swallowing solid food & fluids.

47 years old, female patient, difficulty swallowing solid food, choking & nasal regurge.