

THE MODIFIED BARIUM SWALLOW STUDY IS NOT A FOOD TEST:

Why we shouldn't have Taco Tuesdays

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Disclosures

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History of the modified barium swallow study

- 1895 – first dynamic fluoroscopic imaging by Wilhelm Roentgen in Germany
- Early 1930's- cinefluorography-images of oral and pharyngeal cavities played in rapid sequence up to 60 frames per second
- Videofluoroscopy-dynamic continual video of events
- Early 70's
 - Dr. Jeri Logmeann completing research on speech in patients with Parkinson's using VF
 - Began to recognize that this population also had problems swallowing
 - Presented in 1976 to the ASHA convention in Houston
 - Began calling her assessment the "cookie swallow"
 - Published in 1983 a description of the SLPs role in swallowing and advocated this "cookie swallow" before initiating treatment
 - Dr. Larsen and Dr. Groher also began to connect SLPs with swallowing with the VA, Dr Groher approached Dr. Logemann after 1976 ASHA

Components to assess

- **ACR:**
 - The videofluoroscopic study should be performed by the speech-language pathologists for "both diagnosis and assessment of therapy to promote swallowing without aspiration" (p. 4). The evaluation should include:
 - assessment of the oral preparatory phase, the oral transfer phase and the pharyngeal phase of swallowing,
 - assessment of various bolus viscosities and volumes based on the clinical judgement of the speech-language pathologist or radiologists and the individual's presenting symptoms, and
 - assessment of the individual's response to aspiration (e.g., ability to clear aspirated material, effectiveness of therapeutic maneuvers).

Components to assess

- **ASHA**
 - The VFSS shows the characteristics of the swallow and the patterns of bolus movement, including, but not limited to, initiation of the swallow, nasopharyngeal reflux, pharyngeal clearance, and laryngeal penetration and aspiration.
 - ASHA Preferred Practice Guidelines
 - The purpose of the MBS:
 - Assess anatomy and physiology
 - Evaluate airway protection
 - Evaluate effectiveness of posture, maneuvers, strategies
 - Determine optimum delivery of nutrition/hydration
 - Determine therapeutic techniques
 - Gain information for collaboration

Why does the food matter (or not)?

- Some foods require a different physiology to manage!
 - Ex: liquids require more oral control, solids require more pharyngeal contraction
- Assessing different conditions of same bolus types that require different physiology
 - Self feeding
 - Continual swallows
 - respiration

One moment In time (or not)?

- We can't test everything...can we?
 - This is why a TRAINED SLP needs to complete the study!
 - CLINICAL JUDGEMENT
- It's not really all about just that one moment
 - Assess the physiology and use that information to create a plan
 - Critically assess the patient with the data gathered from the MBS



Skilled vs unskilled

- What makes us skilled?
 - Accurate vision?
 - What do we study that sets us apart?
 - Anatomy
 - Structures of swallowing, cranial nerves
 - **Normal physiology**
 - Disordered physiology and corresponding compensatory strategies and treatment
 - Evidenced based treatment
- What's the unskilled part?
 - Did they aspirate on this food or liquid or not?



Primary purpose?

- WHAT IS THE POINT OF YOUR MBS???
 - What makes it skilled?
 - What are your questions?
 - What information do you need that you can't get anywhere else??

It is not a feeding assessment. You can't simulate everything on a patient's tray in a modified barium swallow study. That's not it's purpose. It's purpose is to capture impairment and predict how a patient is going to do with various textures, knowing the physiology.

-Dr. Bonnie Martin-Harris, MBSimp



What makes the MBS not a screening?

SCREENING

- pass/fail
- Determines need for further assessment
- Not necessarily skilled

ASSESSMENT

- Comprehensive look at anatomy and physiology
- Directs treatment
- Definitely skilled

Soooo... if the MBS is "Patient aspirated with thin, recommend nectar and puree with SLP to assess for meal tolerance" is this a screening????



Why do we look at the food so much??

- What do we learn about physiology?
 - Normal vs disordered
 - 15% of clinical hours/5% of curriculum
- Do we see normal????
 - Maybe not enough....
- My own personal theory

Documentation

- What you report is what happened
 - If it's not documented, it never happened
- Who are you writing for?
- The bolus is not important, it's the physiology



What physiology?

- Oral
 - Important to visualize as part of the MBS
 - Patient may appear outwardly to manipulate bolus appropriately, but during the MBS, SLPs can directly view the process.
 - Assess
 - Timing of mastication onset
 - Adequacy of mastication
 - Formation, control and transfer of bolus
- Oropharyngeal
- Pharyngeal
- Esophageal

Any other opinions?

- Agency for Healthcare Research and Quality
 - Instrument
 - Contents and format
 - Data collection
 - How we get the data
 - Analyses
 - Score and interpret
 - Reporting
 - How we present results

How do we choose food?

- MBSImp
 - Each presentation should give unique information
 - Consider type/size/mode of presentation
- Normal physiology
 - Bolus prep?
 - Thin-very little
 - Dry cookie-quite a bit
 - Bolus control
 - Mixed consistency with thin-quite a bit
 - Chocolate pudding-not so much

During the development of the MBSImp, 5 mL thin and 5mL nectar contributed to clinical identification of every single impairment except bolus prep/mastication.

Where does clinical judgement come in?

- Flowchart vs narrative
- Clinical judgment examines all aspects of a patient to create plan
 - Clinical assessment
 - Behavior
 - Status
 - Patient perspective
 - Instrumental assessment
 - Physiology
 - Response of patient
 - Anatomy
 - Medical history
 - How will care of dysphagia affect the person medically

Why can't we have Taco Tuesday?

- What information do we gain?
 - Cookie/cake/chicken example
 - Critical, skilled thinking
- Radiation
 - ALARA
- Where do we draw the line?

Do I need a protocol?

- Benefits to implementing a protocol
 - Takes focus from bolus to physiology
 - Assess variables independently
 - Bolus size, presentation, strategies, bolus type, etc.
 - Maximizes information gathered from the study
 - Comparison
 - Inter and intra rater reliability
 - Improvement? Decline?
- Drawbacks to a protocol
 - Might give the radiologist the impression that you are OCD

Where do we start?

- What do we know about physiology before that first presentation?
 - Bolus control? Manipulation? Airway protection? Pharyngeal contraction? Timeliness?
 - Hint: none of the above
- If they don't have the physiology to handle the first bolus, how will that affect the other things I want to look at?
 - Residues? Difficulty in clearing residues?
- Critically think about what type of bolus requires the least of these physiologies and is least likely to mess with the rest of the test
 - Thin? Honey? Puree? Solids?



Exceptions? (What about margaritas?)

- Compliance/participation
- Education

Take Out

- What information do we need to provide after an MBS?
 - Skilled or unskilled?
- How do we choose stimuli that will challenge physiology?
- What new information will that next bite or sip get me?
- If I'm not using a protocol, why not?
- Am I documenting enough?

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