

Clinical Problem Solving: Round Robin

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COI Disclosure

- Today's speakers have no conflict of interest to disclose.
- The University of Alabama School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.
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Case #1: HPI

- 56 y.o. M here for f/u after hospital D/C
 - Evaluated for TIA
 - Presented with numbness of left arm but no deficits found on exam
 - MRI normal, symptoms resolved
 - Discharged home without symptoms
 - Now c/o difficulty swallowing
 - Started on day of discharge from hospital
 - Problem swallowing liquids, not solids or meds
 - Notes he has cough, choking at times when swallowing liquids

Case #1: HPI

- Never had anything like this before
- Denies pain with swallowing, food sticking
- Denies visual complaints, other neurologic symptoms
- Denies CP, SOB, weight change or other systemic symptoms

Case 1: PMH/PSH

- PMH:
 - HTN
 - Hypothyroidism
 - Depression
- PSH:
 - Splenectomy (MVA)- 2005
 - Biloma with subsequent drainage

Case 1: Medications

- Aspirin
- Atorvastatin
- Wellbutrin
- HCTZ
- Irbesartan
- Levothyroxine

Case 1: Social/Family History

■ SH:

- Works as a roofer
- Smokes ½ ppd, social ETOH, +THC but no other illicit drugs
- Lives at home with his wife

■ FH:

- Noncontributory

Case 1: Physical Exam

- VITALS: BP 112/77, P-64, RR-16, AF.
- GENERAL:
 - No distress
 - Voice noted to be mildly hoarse.
- NECK:
 - R sided 0.5 cm soft tissue mass (?LN)
 - Anterior cervical
 - Soft, nontender, somewhat mobile
- Rest of exam: normal (including Neuro/CNs)

Initial evaluation

- CBC normal
- BMP with Cr of 2.9 above baseline of 0.9
- Pt was admitted to TH service for hydration

Initial evaluation-2

- Due to neck mass, patient got a CT neck in the UED which showed left true vocal cord paralysis
- ENT was consulted
 - Barium swallow confirmed aspiration with thin liquids
 - CT of chest was done to rule out compression of recurrent laryngeal nerve, which was normal

Initial Evaluation- Comment

- ENT reserved laryngoscopy for outpatient f/u since diagnosis was already made with CT
 - Laryngoscopy is usually the first procedure completed to evaluate this clinical scenario

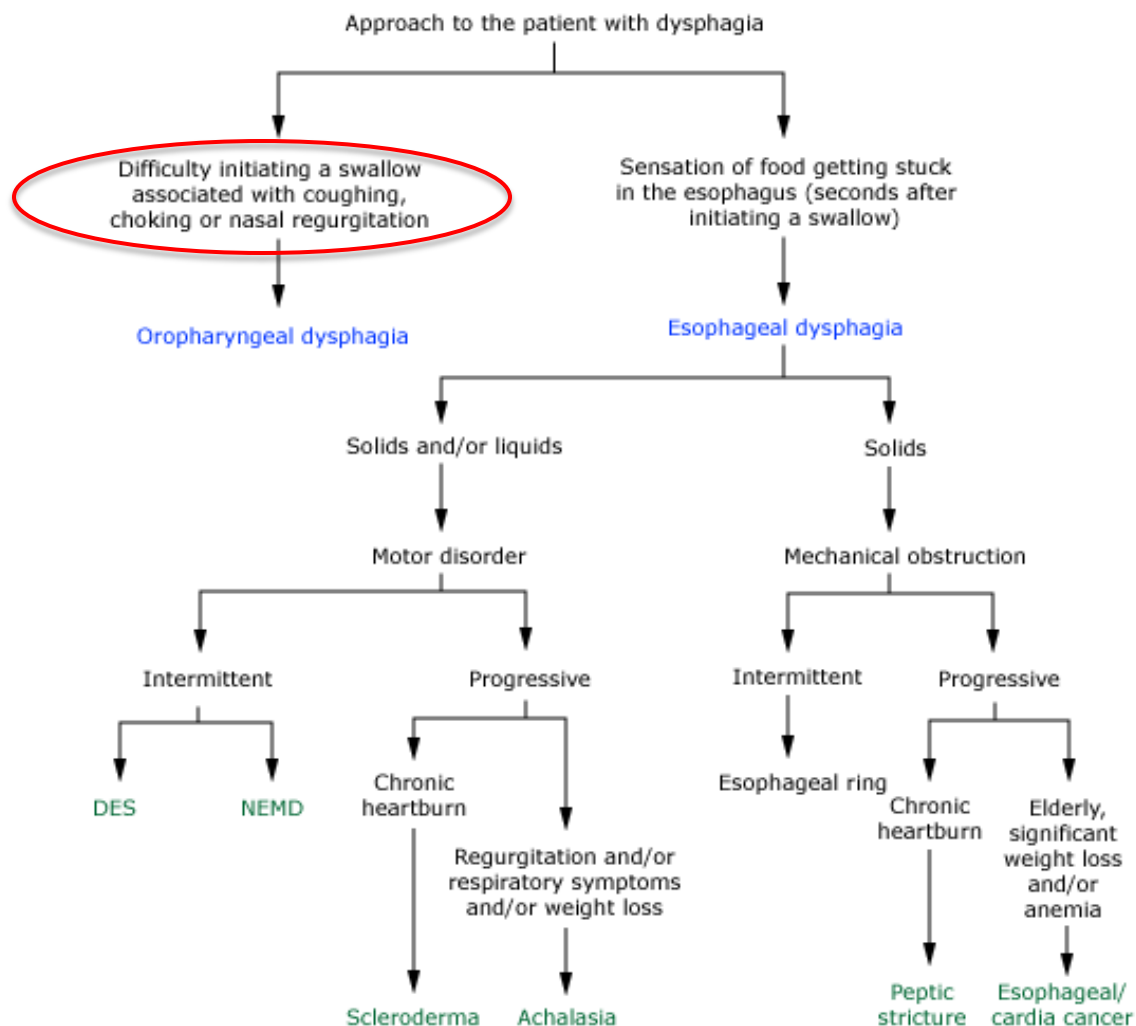
Patient followup

- Patient was able to tolerate thick liquids
- He was discharged home with close ENT follow-up
- Per records, he is now back to baseline

Disclosure

- Case and discussion adapted from presentation by: Dr. Nidhi Huff

Diagnosis of dysphagia



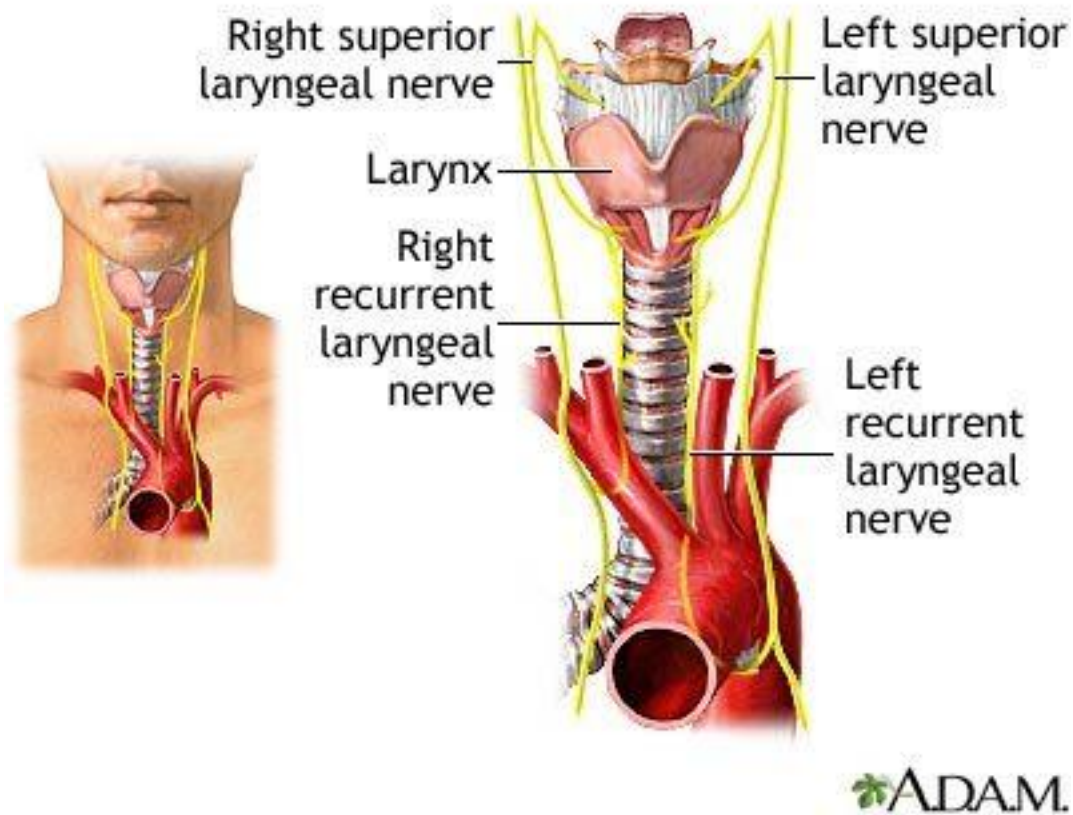
DES: diffuse esophageal spasm; NEMD: nonspecific esophageal motility disorder.

Representative causes of oropharyngeal dysphagia

Iatrogenic	Neurological
Medication side effects (chemotherapy, neuroleptics, etc)	Brainstem tumors
Postsurgical muscular or neurogenic	Head trauma
Radiation	Stroke
Corrosive (pill injury, intentional)	Cerebral palsy
Infectious	Guillain-Barré syndrome
Diphtheria	Huntington's disease
Botulism	Multiple sclerosis
Lyme disease	Polio
Syphilis	Postpolio syndrome
Mucositis (herpes, cytomegalovirus, candida, etc)	Tardive dyskinesia
Metabolic	Metabolic encephalopathies
Amyloidosis	Amyotrophic lateral sclerosis
Cushing's syndrome	Parkinson disease
Thyrotoxicosis	Dementia
Wilson's disease	Structural
Myopathic	Cricopharyngeal bar
Connective tissue disease (overlap syndrome)	Zenker's diverticulum
Dermatomyositis	Cervical webs
Myasthenia gravis	Oropharyngeal tumors
Myotonic dystrophy	Osteophytes and skeletal abnormalities
Oculopharyngeal dystrophy	Congenital (cleft palate, diverticula, pouches, etc)
Polymyositis	
Sarcoidosis	
Paraneoplastic syndromes	

Adapted from: Cook DJ, Kahrilas PJ. AGA: Technical review: Management of oropharyngeal dysphagia. *Gastroenterology* 1999; 116:455.

Anatomy of larynx



Importance of H & P

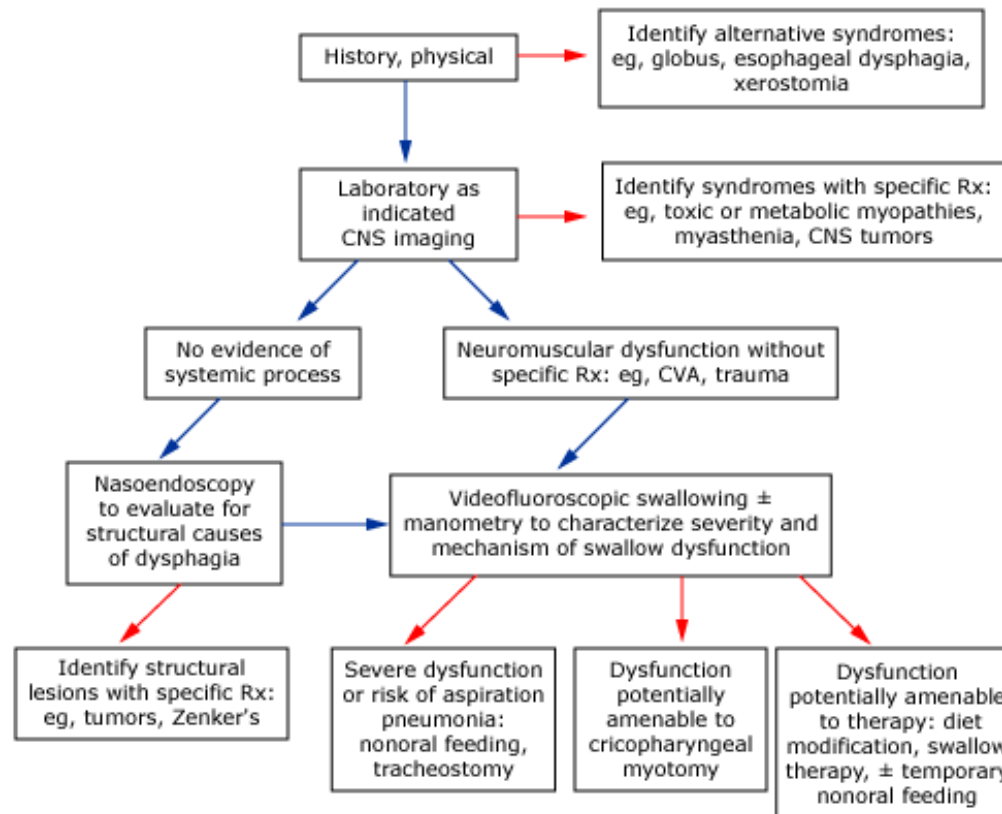
- A careful history and physical examination can:
 - Distinguish esophageal/ oropharyngeal dysphagia.
 - Predict the cause of oropharyngeal dysphagia
 - (should be confirmed by specific testing)

Specific clues in the history:

Oropharyngeal dysphagia

- Symptoms immediately upon swallowing
- Identify cervical region as site of symptoms
- Possible malignant cause:
 - Older patients
 - History of alcohol abuse, smoking, or weight loss
- Repositioning body to facilitate swallowing
 - Extending arms and neck, using finger to move food
- Changes in speech neuromuscular dysfunction
 - Hoarseness or weak cough →vocal cord paralysis.

Evaluation and management of oropharyngeal dysphagia



Summary of the clinical approach and key objectives in the management of oropharyngeal dysphagia. The objective is to reach a box targeted by a red arrow, which equates to a specific management strategy. Blue-headed arrows indicate a suggested pathway to proceed with the evaluation.

CNS: central nervous system; Rx: therapy; CVA: cerebrovascular accident.
Adapted from: Cook, IJ, Kahrilas, PJ. AGA: Technical review: Management of oropharyngeal dysphagia. Gastroenterology 1999; 116:455.

Normal vocal cord function



Vocal cords open during breathing to allow air into lungs.



Vocal cords close when speaking so air from the lungs presses between them to cause the vibrations that produce sound.

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<http://www.mayoclinic.com/health/medical/IMo2764>

Vocal Cord paralysis: Signs and Symptoms

- A breathy quality to the voice
- Hoarseness
- Noisy breathing
- Loss of vocal pitch
- Choking or coughing while swallowing food, drink, or saliva
- The need to take frequent breaths while speaking
- Inability to speak loudly
- Loss of gag reflex
- Ineffective coughing

Vocal Cord paralysis: Causes

- Injury to recurrent laryngeal or vagus nerves
- Tumors causing compression
- Injury to TVC during surgery or intubation
- Neurologic disorders
 - Myasthenia gravis
 - ALS
 - Parkinson's
- Idiopathic (1/3 of cases)
 - 40% had complete voice recovery, 60% partial
 - Recovery after 1 year was rare

Vocal Cord paralysis: Treatment

- Voice therapy (exercises)
- Bulk injection
- Vocal cord repositioning (surgical)
- Tracheotomy (only if both TVC involved)

Take home points

- Characterize “swallowing problems”
 - Dysphagia, odynophagia, aspiration
 - Oropharyngeal vs. Esophageal dysphagia
- Concurrent speech symptoms → TVC issues
- Causes: anatomic, neurologic or idiopathic
 - Idiopathic may be viral
- Recent TIA probably a “red herring”

References

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