

HISTORY: ,The patient is a 76-year-old male, with previous history of dysphagia, status post stroke. The patient stated that he was at Hospital, secondary to his stroke, where he had his initial modified barium swallow study. The patient stated that the results of that modified revealed aspiration with thin liquids only. He is currently eating and drinking without difficulty and he feels that he can return to a regular diet with thin liquids. A modified barium swallow study was ordered to objectively evaluate the patient's swallowing function and safety and to rule out aspiration.,**STUDY:** , Modified barium swallow study was performed in the radiology suite in cooperation with Dr. X. The patient was seated upright and in a video-imaging chair throughout this assessment.,To evaluate the patient's swallowing function and safety, he was administered graduated amounts of liquid and food mixed with barium in the form of thin liquids (teaspoon x3, cup sip x3); nectar-thick liquid (teaspoon x2, cup sip x3); pureed consistency (teaspoon x3); solid consistency (1/4 cracker x1).,**FINDINGS,ORAL STAGE:** , The patient had no spillage out lips. Oral residual after swallow with increased viscosity requiring multiple swallows to clear oral cavity.,The patient has reduced lingual retraction contributing to vallecula pooling after the swallow. Trace premature spillage was noted with thin liquids during this assessment.,**PHARYNGEAL STAGE:** , Aspiration noted on cup sips of thin liquid. Trace-to-mild penetration with teaspoon amounts of thin liquid during and after the swallow. The penetration after the swallow occurred secondary to spillage on the piriform sinuses into the

laryngeal vestibule. The patient has incomplete laryngeal closure, which allowed the aspiration and penetration with thin liquids. The patient had no aspiration or penetration occur with nectar-thick liquid, puree, and solid food. The patient has a mildly reduced hyolaryngeal elevation and anterior movement that leads to incomplete epiglottic inversion that contributes to vallecula pooling. Mild-to-moderate pooling in the vallecula after the swallow with liquids and puree, this residual did decrease with the solid feed presentation. The patient has mild residual of pooling in the piriform sinuses after a swallow that did clear with sequential swallows.,CERVICAL ESOPHAGEAL STAGE: , The patient's upper esophageal sphincter opening is well coordinated with swallow and readily accepted the bolus.,DIAGNOSTIC IMPRESSION: , Mild aspiration with cup sips of thin liquid, penetration during and after the swallow with teaspoon amounts of thin liquid. No aspiration or penetration occurred with thick liquid, pureed, or solid food during this assessment.,PROGNOSTIC IMPRESSION: , With a modified diet, the patient's potential for swallowing safety is good.,PLAN:,Based on this evaluation, the following is recommended:,1. The patient should be on a regular diet with nectar-thick liquids to help prevent aspiration and penetration.,2. The patient should have unthickened water in between meals to help decrease his risk of dehydration.,3. The patient should complete good oral care two times a day to decrease bacterial growth in mouth.,4. The patient should be seated at a 90-degree angle when eating and drinking, as well

as take small bites and small sips to help decrease risk of aspiration and penetration and reflux., Thank you for the opportunity to evaluate the patient. I look forward to working with him in the outpatient setting to improve his swallowing function and safety. Outpatient skilled speech therapy is recommended for a trial of neuromuscular electrical stimulation therapy for muscle re-education, as well as to train patient to use swallowing techniques and maneuvers that should improve his swallowing function and safety.