

I. Equipment

- a. Varibar Thin Liquid – follow mixing instructions on container for 40% W/V
- b. Radiopaque yardstick (taped to the bucky)
- c. Water
- d. Barium tablet
- e. 2 cups for drinking
- f. 50mL syringe
- g. Cell phone stopwatch

II. Personnel

- a. RA should be present for the exam
  - Tapes the yardstick to the upright bucky (*not midline*)
  - Supervises exam
- b. Hospital Technologist
  - Prints order, reviews order with rad/RA
  - Documents patient history and pregnancy status prior to exam
  - Prepares the barium as described above
  - Uses a syringe to measure 150mL's of water for cup 1
  - Uses a syringe to measure 150mL's of barium for cup 2
  - Has the stopwatch ready
  - Takes timed radiographs

III. Procedure

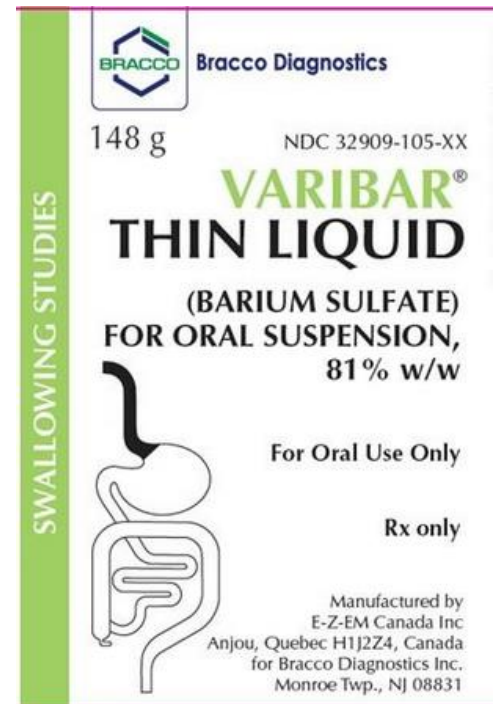
- a. Position the patient against the upright bucky in an LPO position
- b. Adjust bucky to ensure entire esophagus will be included on the image
- c. Scout image to confirm patient position (pt. must remain in this position for the entire exam)
- d. Ask the patient to drink all 150mL of barium as quickly as possible (within 30-45 seconds)
- e. Start stopwatch as the patient begins drinking and keep it running for 5 min
- f. Timed images taken (1 min, 2 min, and 5min) if necessary
- g. Patient to swallow 13mm barium tablet with 150 mL of water
- h. Ask the patient to drink all 150mL of water as quickly as possible.
- i. Start stopwatch as the patient begins drinking and keep it running for 5 min
- j. Timed images taken (1 min, 2 min, and 5min) if necessary

IV. Post Procedure

- a. Measure height of barium column on 1min, 2min and 5 minute images
- b. If calibration is necessary, measure 1 cm mark on the yard stick and use (ctrl+M) to enter cm value (1)

V. Special Considerations

- a. Timed images should only be taken until barium or the 13mm barium tablet have cleared from the esophagus. If the 1min image demonstrates a barium free esophagus, the two and five minute images are unnecessary
- b. Esophagram or UGI exam with immediate and significant contrast stasis: Turn exam into a timed barium swallow (tape a ruler or coin to the fluoro table for measurement purposes, use number markers, and stopwatch)
- c. Lock the fluoro tower in position to include the entire column of barium and keep pt. in LPO position
- d. Use your best judgement re: additional swallows of barium when turning an exam into a timed study:
  - If the barium column clears as you set up for the timed study, follow the normal timed barium swallow protocol
  - If the achalasia is severe and the column of barium is not emptying, begin timed study immediately (have technologist start stopwatch) and capture fluoro images at 1min, 2 min, and 5 min intervals



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| <b>Approved by:</b> | Keith Dangleis, MD                                  |
| <b>Role:</b>        | Physician Supervisor, RIA Fluoroscopy Technologists |