Austin Radiological Association

Upper G.I. with Air Contrast (AGES 11-17)

Scheduling and Prep:

*The patient should be NPO (nothing to eat or drink) from midnight before their exam until after their exam is completed. 8 hours if exam is in the afternoon. Patient is allowed to brush their teeth. No water, food, chewing gum, smoking.

Supplies: *Effervescent crystals and water *Air contrast barium (HD-200, 764, or equivalent)
*Single contrast Upper G.I. barium (L-186 or equivalent)
*1 medicine cup, 1 Straw and two drinking cups (with mL measurements to document amount of barium given to the patient)
*13mm barium tablet - **ONLY** for patients with dysphagia and the evaluation of ability to swallow pills has been established. *Barium tablet on the image intensifier for measuring purposes.
*Anatomical side marker

When possible: Use an anatomical marker within the primary beam to mark images with left or right marker. Do not compromise the exam if it is too difficult to maintain marker in the images.

***EVALUATE THE OLDER PEDIATRIC PATIENT**

Talk to your patient to establish their level of maturity. Talk to the parent to see if the patient would likely be able to handle holding in the air crystals. If dysphagia is an issue, ask both parent and child if they have a history of being able to swallow tablets. (They may take tablet forms of vitamins or other meds without difficulty). Explain in detail how the "fizzies" work. Let them know what to expect. Encourage them to sip them down quickly as opposed to all at once. They might surprise you and do better than you think.

Air Contrast Esophagus Procedure:

*Have patient in the upright position
*With patient holding the medicine cup with water, pour effervescent crystals in to the Water. Encourage the patient to drink the mixture very quickly. Instruct them not to belch.
*Slightly oblique the patient to the left. (This will eliminate superimposition of the esophagus And spine). Have the patient hold the air contrast barium in their left hand and drink big Swallows quickly, one right after the other until the cup is empty.

Spot Images:

*Take several (4-6) air contrast filled barium coated esophagus images.
Concentrate on the distal esophagus at the EG junction. Once the distal esophagus has been sufficiently imaged; move superior to the mid and proximal esophagus.

As always, use ALARA to lower radiation exposure, it is best to do some screen captures, or image holds as opposed to all exposures.

Procedure for Imaging the Stomach:

*Lower the table, placing the patient in the prone position.
*Have the patient roll (right side down, supine, left side down and then prone) around like a Log two times to coat the stomach well
*The patient should then lie in the supine position.

Spot Images of the Stomach:

*Immediately look to see if you can capture an image to demonstrate the duodenal sweep going across the spine. This is to evaluate for mal rotation of the small intestines. If the stomach is not emptying; move on to the air contrast stomach images and keep an eye on the barium emptying the stomach and catch the sweep as soon as it is apparent.

- Take three images of the stomach in progressively less steep obliques.
- AP of the stomach.
- Right lateral. (Be sure to roll the patient slightly forward to clear the barium from fundus). This will be the best image to demonstrate the air contrast filled fundus.

Procedure for imaging the single Contrast Esophagus:

*Position the patient in the RAO position with their right arm by their side. Have their head on a pillow. Have them hold the single contrast barium cup with a straw in their left hand.
*Have the patient drink one large swallow and just watch the tail of the barium all the way down. This will show their motility without gravity helping. Take note of any motility issues.
*Have the patient drink three large swallows consecutively.

Spot Images:

- Take several hold images of the barium filled esophagus from upper esophagus to EG-junction. (Evaluate for hiatal hernias, Schatzki's rings, and motility issues.)
- Image the barium filled bulb and antrum.

Utilize the hold option here more than exposing images.

*Roll patient to their left side.

- Take images of the air contrast filled duodenal bulb and antrum

*Roll the patient supine and check for reflux. Have the patient bear down or strain. Roll the patient enough RPO to place the barium up against the EG junction and repeat straining. Image any reflux and label with “Reflux” and an UP arrow.

- Take an AP of all barium coated structures.

Overhead Images:

Only do an overhead if your Fluoro equipment is not able to include the entire stomach and small bowel that has filled with barium up to that point of the study in one overall image. .

- AP stomach and barium filled structures

*If the patient has a "U" shaped stomach, use a 30-degree cephalic angle.

**If the patient is having dysphagia, and it has been established that the patient is comfortable swallowing a tablet, have them swallow a barium tablet with water, at the end of the study. Document the status of the ingested barium tablet with a screen capture image, of the EG junction with pill stuck, or pill went down OK. If pill remains lodged at the EG junction for more than about two minutes, have the patient dink one swallow of thin barium to see if the pill is flushed down. If the pill lodges in the upper esophagus, have the patient sip on water and have them remain at the clinic until the tablet has cleared the esophagus. If the patient refuses to take the pill: document this. If the patient tried to swallow the pill and could not or coughed it out, document this.

****Always consult the on-site radiologist for questions.**

** These are the minimum images needed to demonstrate the proper anatomy for this exam. When deemed necessary, more images can be taken to demonstrate pathology or by Radiologist's request.
**Care should be taken to minimize patient and technologist exposure. Utilize the hold option especially on barium-filled structures more than air contrast structures.