

Upper GI Exam – Single or Double Contrast Barium Protocol

PURPOSE / CLINICAL INDICATION:

- Disease suspected involving the stomach or duodenum or if patient refers symptoms to the upper abdomen
 - Abdominal pain, early satiety, epigastric distress or discomfort, dyspepsia, nausea, vomiting, upper GI bleeding, anemia, weight loss, symptomatic or suspected gastroesophageal reflux disease
- Evaluate anatomy for pre-surgical planning

SPECIAL CONSIDERATIONS / CONTRAINDICATIONS:

- Air contrast exam should be attempted on all patients that can tolerate.
 - If the patient is uncooperative or too debilitated, the study can be completed as a single-contrast exam.
- If the esophageal evaluation is likely to be prolonged (patient status, operator skill), begin with the stomach/duodenal evaluation and perform esophageal evaluation second

	ORDERABLE NAME:	EPIC BUTTON NAME:	NOTES:
UTSW			
PHHS	XR Upper GI XR Upper GI W Small Bowel Follow Thru	Upper GI	Perform small bowel follow through protocol after this protocol

EQUIPMENT / SUPPLIES / CONTRAST:

- Barium oral contrast
- Effervescent granules (aka fizzies)
- Small measure of water (to wash down effervescent granules)

PATIENT PREPARATION:

- Review for contrast allergy
- Patient should be NPO after midnight for this exam
- Question patient about:
 - Relevant symptoms
 - Previous abdominal or esophageal surgery, and prior GI exam/results
 - Possibility of pregnancy
 - Review prior exams if available
- Explain the procedure to the patient.
 - Describe how to perform breath-holding during exam (“don’t take in a deep breath, just stop breathing”).
 - Caution the patient not to belch or talk after drinking the effervescent granules.

PROCEDURE IN BRIEF:

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COMPLETE PROCEDURE TECHNIQUE:

- Assess patient ability to tolerate air contrast to determine if you will administer it
- Optional: Scout image if prior abdominal surgery
- Perform Cervical/Thoracic Esophagus Upright Phase (see “Esophagram – Single or Double Contrast Barium Protocol”)
 - You may do the air contrast esophagram later if you prefer.

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- If patient has high cervical complaints, include the hypopharynx evaluation, otherwise may exclude this.
- Take the empty cup from the patient. Turn the table into a horizontal position.
 - Give the patient a pillow on which to rest his/her head, you may choose to have patient supine or left lateral decubitus.
 - LLD position can potentially help to minimize more contrast entering the small bowel as contrast is in the dependent portion of the gastric fundus/cardia.
- Have patient to roll 360 degrees twice for gastric mucosal coating (if patient can tolerate)
 - Check for degree of coating, further rolling may be needed
- Take images of stomach if satisfactory coating achieved
 - Look around GE junction intermittently for possible reflux
 - Supine position evaluates the gastric body
 - LLD or LPO evaluates the gastric antrum and pylorus
 - Right lateral decubitus or RAO evaluates the gastric fundus and cardia
- If there is adequate contrast within the duodenum, then start taking images
 - If not, position patient right side down to encourage gastric emptying of contrast
- Perform Cervical/Thoracic Esophagus Prone Phase (see “Esophagram – Single or Double Contrast Barium Protocol”)
- Optional: Patient may be given a barium tablet to swallow with water in the upright AP position to evaluate for esophageal obstruction.

IMAGE DOCUMENTATION:

- Optional: Scout image if prior abdominal surgery
- Images Needed for Stomach:
 - LPO or left lateral decubitus for gastric antrum (sometimes air-bulb shot can be obtained also)
 - AP (supine) for gastric body, inferior portion
 - RPO for proximal gastric body and fundus
 - Right lateral or prone RAO for fundus
 - Evaluate gastric motility in prone RAO position
 - Additional images (en face and en profile if abnormalities seen)
- Images Needed for Duodenum:
 - LPO for air-bulb shots (compression paddle sometimes help), 1 to 2 additional LPO larger field shots to include C-loop and please make sure the duodenum is well distended
 - Prone RAO (relative to exam table, compression paddle may help) for bulb and overall C-loop shot
 - Additional images if (+) abnormalities
 - AP image near the end of the exam to evaluate opacified anatomy and possible abnormality
- Images Needed for Esophagus:
 - Please refer to “Esophagram – Single or Double Contrast Barium Protocol”

ADDITIONAL WORKFLOW STEPS:

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REFERENCES:

- [General Fluoroscopy Considerations](#)
- [Procedure Contrast Grid](#)

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- ACR Practice Parameter for the Performance of Esophagrams and upper Gastrointestinal Examinations in Adults, amended 2014

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