

Upper GI Exam – Laproscopic Band Evaluation

PURPOSE / CLINICAL INDICATION:

- Immediate Post Op Study
 - Confirm position of all components
 - Evaluate pouch size
 - Exclude leak and obstruction
- Later Follow-up Assessment
 - New symptoms or inadequate weight loss
 - Confirm position of all components
 - Evaluate pouch size
 - Exclude obstruction
 - Evaluate for presence of any complications

SPECIAL CONSIDERATIONS / CONTRAINDICATIONS:

- Water-soluble contrast (low-osmolar, nonionic) is the preferred initial contrast agent in the settings of suspected perforation or recent post-operative state
- In case of suspected leak, it minimizes complications from contrast leakage into the mediastinum, pleural space, or peritoneal cavity.
 - Low-osmolar nonionic are safe if aspirated
 - Maximum volume of low-osmolar nonionic administered orally is 100 mL
- No effervescent granules are needed

	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:

- Immediate post op – Low osmolar non-ionic water soluble contrast
 - Follow with thin barium if postop evaluation shows no leak with water soluble contrast
- Routine follow-up – Barium
 - If no suspected leak based on clinical history/symptoms

PATIENT PREPARATION:

- Review for contrast allergy
- NPO after midnight

PROCEDURE IN BRIEF:

- Focused imaging of the distal esophagus, gastric pouch, distal stomach in relation to the adjustable gastric band.
- For immediate post op study, start with water soluble contrast. Repeat with thin barium if no extravasation identified.

COMPLETE PROCEDURE TECHNIQUE:

- Immediate Post Op Study
 - Scout by technologist – assess band/entire tubing/port positions
 - Position – Semi-upright, evaluate in 2 different positions, prefer orthogonal
 - Have the patient drink slowly
 - Imaging with cine rapid imaging (3 images/second) centered around the lower esophagus and stomach region

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- If there is no complication (i.e. obstruction or leak), repeat evaluation with additional thin barium
- Later Follow-up Assessment
 - Scout by technologist – assess band/entire tubing/port positions
 - Position – standing if patient can tolerate
 - Scout by radiologist under fluoroscopy: Port in profile (lateral), ensure that injectable area of port faces outward
 - Have the patient drink slowly
 - Evaluate in 2 different positions, prefer orthogonal
 - Imaging with cine rapid imaging (3 images/second) centered around the lower esophagus and stomach region
 - Move patient prone in RAO oblique and repeat if patient can tolerate

IMAGE DOCUMENTATION:

- Immediate post-op or suspected leak
 - Overhead images
 - AP scout – include all band, tubing, and port
 - AP delayed – include opacified post band bowel, confirm gastric emptying
 - Digital spot images
 - 2 different projections (prefer orthogonal) per contrast agent focused on operative site
- Routine follow-up
 - Overhead images
 - AP scout – include all band, tubing, and port
 - Digital spot images
 - Lateral scout of port in profile
 - Upright 2 different projections (prefer orthogonal) focused on gastric pouch
 - Prone RAO focused on gastric pouch
 - AP delayed fluoro save to confirm gastric emptying if not seen on earlier images

ADDITIONAL WORKFLOW STEPS:

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REFERENCES:

- [General Fluoroscopy Considerations](#)
- [Procedure Contrast Grid](#)
- ACR Practice Parameter for the Performance of Esophagrams and upper Gastrointestinal Examinations in Adults, amended 2014 Normal Findings
 - Band position – Band oblique in LUQ – lateral edge pointed cephalad toward diaphragm, medial edge pointed caudal toward spine, near GE junction with +/- small pouch. Absence of a pouch can be a normal finding.
 - Band stomal width – ideally 3-7 mm. (Estimate stomal width by the width of contrast column seen going through stoma. Stoma itself not directly visible unless port injected with contrast)
 - Pouch – size/morphology should be < 20ml in capacity ideally.
 - Tubing – no kinks or disconnections.
 - Port – injectable component (inner small circle) facing externally toward skin
 - Absence of perforation or complete obstruction
 - No esophageal reflux from pouch
- Abnormal Findings

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- Band
 - Malpositioned band (band posterior slippage)
 - Assess “O” sign, phi angle, distance between diaphragm and pouch, etc...
 - Less than 45 degree angle is considered normal
 - Dilated pouch due to band slippage
 - Over-narrow stoma (can be associated with concentric pouch dilatation)
 - Estimate stomal size by size of lumen of contrast going through the stoma or presence of obstruction.
 - Stomal size not directly measurable unless contrast placed into tubing to fill stoma receptacle. Only done if requested specifically.
 - Eccentric band herniation
 - The saline receptacle within inflated band bulges asymmetrically due to wall weakness.
 - Necessitates contrast injection into band to determine, if applicable
 - Can also be associated with concentric or eccentric pouch dilatation
 - Transmural band penetration/erosion – erosion of the band into the pouch
- Pouch
 - Pouch dilatation – eccentric or concentric
 - Pouch dilatation can be secondary to a malposition /slipped band, narrow stoma or stomal configuration changes due to band wall herniation, or over-eating)
 - Pouch – esophageal reflux
 - Perforation
- Tubing
 - Kinked tubing
 - Discontinuous tubing
- Port
 - Port malposition – injection portion of port not accessible to inject
 - Infection around port – not a fluoroscopic diagnosis

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