Upper GI Exam – Water Soluble Protocol

PURPOSE / CLINICAL INDICATION:

- Used when gastric outlet obstruction, duodenal obstruction, or perforation/leak is suspected
- Used if endoscopic procedure or surgery planned to follow
- Used including immediately post-bariatric surgery

SPECIAL CONSIDERATIONS / CONTRAINDICATIONS:

- Water-soluble contrast (low-osmolar, nonionic) is the preferred initial contrast agent in the settings of suspected perforation:
  - In case of suspected perforation/extravasation; it minimizes complications from contrast extravasation into the mediastinum or pleural/peritoneal space.
  - Should endoscopy be necessary, it is easier for the endoscopist to see through a transparent contrast medium than through opaque barium.
  - Maximum volume of low-osmolar nonionic administered orally is 100 mL.

	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:

- Cup and straw x 2
- Water-soluble contrast – low-osmolar, nonionic
- Thin barium

PATIENT PREPARATION:

- Review for contrast allergy
- Review patient's history and prior radiological exams.
- If patient cannot take contrast orally, then will require enteric tube for contrast delivery
  - High cervical esophagus tube position during the procedure will increase the risk for aspiration
- Contrast will exit both the side hole and end hole

PROCEDURE IN BRIEF:

- Targeted exam in region of concern in the upper GI system

COMPLETE PROCEDURE TECHNIQUE:

- Examine scout film for free intra-abdominal air, gastric distension, colon obstruction, or retained barium
- Subtle perforations can be missed by using a water-soluble agent only.
  - If no perforation is demonstrated using water-soluble contrast, the study should be repeated immediately with thin barium
- Position patient as upright as can be tolerated
- If delivering through enteric tube, position tube end hole above the level of suspected injury or obstruction
  - Keep note of side hole location
- Image during contrast administration, evaluate the entire region of concern.
  - If no contrast extravasation or other issue identified, reimage in as close to orthogonal to first imaging as possible
- If using water soluble contrast and no contrast extravasation identified, re-image using thin barium contrast as small extravasations can be missed with water soluble contrast alone

- Modify as needed especially for patient unable to stand or move on the examtable.

IMAGE DOCUMENTATION:

- Region of interest
  - Scout
  - Orthogonal projections (if possible)
  - Repeat with thin barium if no extravasation identified

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

Last Edit Date:	3/5/2018	Last Review Date:	3/5/2018