





Requirements of Barium Products

- No sedimentation
- Mix easily with all digestive products
- Adhere readily
- High barium content
- Homogenous structure
- Non-toxic

Current Status of UGI
in Examining the Stomach

- Decreased number of examinations:
- Increased use of US, CT, & MR
- Popularity of endoscopy
- Decreasing skills & poor accuracy
- Highly accurate & safe diagnostic tool

Endoscopic Examination

- Biopsy and therapeutic procedures
- Pt's discomfort
- Difficulty in gastric wall evaluation
- Can not pass the narrowed segment and 3rd portion of duodenum
- A risk in pt's with severe COPD

Requirement for Optimum UGI

- Concentration of CM
- Amount of CM
- Techniques

Examination Techniques of UGI

Basic: Erect compression
Mucosal relief
Prone compression
Double contrast

Others: Pad application
Flow technique
Barium pool

Flexible Examination

- Step by step drinking of CM
 - Anterior wall lesion
 - Suspicious but not definite lesion
- Immediate drinking of sufficient CM
 - Posterior wall lesion
 - A large mass
 - A large amount of gastric secretion
 - Distorted anatomic orientation
- Control the amount of effervescent agent

Compression Study

Most important
Soft touch with light "in & out"
Compress tangentially: need pt's help
No skipped regions
Table head tilting when difficult in erect position

Mucosal Relief Study

When compression is insufficient
To determine the lesion location
Do not use this technique for lesions in the body or fundus

Pad Compression

Useful for examiners who are not skillful for compression technique
Very useful for detection small lesions
Be cautious not to compress too much
Adjust patients respiration & arms & table position

Double Contrast Technique

Accurate for detecting small lesion
Useful for examining the proximal third of the stomach
A simple DC without single contrast exam. Is no more accurate than the single contrast exam.

Flow Technique

- One of Dr Laufer's favorites
- Very useful for detecting subtle lesions in body
- Necessary for nice depiction of lesions

Barium pool

Useful for excellent mucosal coating
Useful for determining the extent and boundary of the mass or lesion

Comparison of UGIS & GFS in Pt's with Gastric Cancer

-Ha et al, 2000 RSNA presentation

- 261 gastric cancers in 250 pts: double in 9 pts and triple in 1
- EGC 141 and AGC 120
- Maximum diameter & range of lesion size:
EGC-3.1 cm (0.5~8.5cm)
AGC-5.4 cm (1.5~12.5cm)

UGIS vs GFS for Detecting Gastric Cancer

-Ha et al, 2000 RSNA presentation

Overall:	UGIS - 249/261(96%)
	GFS - 258/261(99%)
AGC:	UGIS - 119/120(99%)
	GFS - 118/120(98%)
EGC:	UGIS - 130/141(92%)
	GFS - 140/141(99%)

Conclusion

UGIS is one of the highly recommendable & safe screening tests in gastric mass survey