Selecting the proper patient for Anti-Reflux Surgery

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Keys to Success!

- Symptoms attributed to reflux are physiologically proven
- Esophageal and Gastric motility relatively intact
  - LES relaxes completely
  - Peristaltic contractions
  - Stomach empties
- Well performed operation
- Pre and Post Op Communication

Document the Physiology

<u>Typical Symptoms</u>

- Proof of esophagitis by bx
- Response of symptoms to PPI
- If either is absent needs 24 hour pH probe study
  - NERD vs GERD

Document the Physiology

Atypical Symptoms

- All patients need 24 hour pH study
- Usually Need Dual Probe
  - Pulmonary proximal probe 15 cm above LES
  - Laryngeal proximal probe above cricopharyngeus
- Must correlate Sx with Reflux

Why All Patients Need Esophagoscopy

- Detect Barretts Esophagus
- Rule out neoplasm
- Establish baseline to follow post op complaints

Can we predict Post-Op Dysphagia?

- Amplitude of contractions?
- Peristaltic vs non-peristaltic contractions
- LES pressures?
- Best predictor of post op dysphagia is pre-op dysphagia
- Esophageal function may improve following correction of GER

Esophageal Manometry

- Exclude Achalasia
- Detect primary motility disorders- DES
- Special Cases
  - Hypercontractile Esophagus
  - Low amplitude contractions
  - Hypertensive LES with normal relaxation
- Manometric values alone should not dictate full vs partial fundoplication decision

Impact of Motility Disorders

- Are post-fundoplication side effects more common if LESP is normal ?
- Importance of upright vs supine reflux
- Diminished Peristalsis- how much to wrap?
- Esophageal Spasm induced by reflux
  - Is it real?
  - Is it common?

Predictors of Outcome following Lap Nissen

Table VI. Combined effect of predictors on outcome

	24-hour pH score	Primary symptom	Response to acid suppression therapy	Odds ratio
BASELINE	**Normal**	**Atypical**	**Poor/none**	**1.0**
	Normal	Typical	Complete/partial	16.7
	Abnormal	Atypical	Complete/partial	17.7
	Abnormal	Typical	Poor/none	27.2
	Abnormal	Typical	Complete/partial	89.8

Campos et al J Gastrointest Surg 1999

The Ideal Patient is Rare

- Heartburn responsive to PPI
- Esophagitis on biopsy
- Hiatal Hernia- none or small
- Low LES resting pressure
- Not Obese
- No other "functional illness"

Impact of Obesity on Antireflux Operations

TABLE B. RECURRENCES ACCORDING TO WEIGHT CATEGORY

	NORMAL	OVERWEIGHT	OBESE
RECURRENCE	4 (4.5%)	7 (8.0%)	15 (31.3%)
NO RECURRENCE	85 (95.5%)	80 (92.0%)	33 (68.7%)
P values *	P= NS vs. overweight	P= .001 vs. obese	P= < .0001 vs. normal

Impact of Pre-Existing Conditions

- Barrett's Esophagus
  - ? Higher failure rate at long tem f/u
    - Csendes 1998, Salama and Lamont 1990
- Paraesophageal Hernia
  - Higher conversion rate
    - Frequent Asymptomatic re-herniation
    - Collis procedure may be underutilized
- "Illness behavior"

Delayed Gastric Emptying

- Suspect if vomiting is the primary symptom
- Objective measures of gastric emptying may improve following fundoplication

BUT

- Patients with Gastroparesis often have more bloating following Nissen
- Pyloroplasty or Gastrojejunostomy of uncertain (if any) benefit

Communication is Key

- Set appropriate pre op expectations
- Prepare patient for dysphagia, bloating, etc
- *Candid* written information is helpful
  - prompts questions patients might be afraid to ask
  - helps set expectations

Red Flags!

- “Esophageal shortening”
- Obese Patient
- Symptoms which fail to respond to PPI’s
- Other GI motility disorders
  - Gastroparesis
  - Severe constipation
- Dysphagia as indication for a redo operation

Patient Selection

- Type of symptom and response to PPI
- Status of Esophageal Motility
- Anatomic Status of the Esophagus
- Body Habitus
- “Illness Behavior”
- Size of Hiatal Hernia