PPI-Refractory GERD Symptoms: Evaluation and Management

Marcelo F. Vela, MD, MSCR
Mayo Clinic Arizona
Scottsdale, AZ, USA

MEDICAL TREATMENT: SUPPRESS GASTRIC ACID

Heartburn
Nociceptor activation
Eosophageal Defense Mechanisms
Injury
LES
Acid

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MEDICAL TREATMENT: SUPPRESS GASTRIC ACID

Incomplete Response to PPI:
30% for heartburn
worse for other symptoms

How do we deal with these patients?
How can we improve our diagnostic and therapeutic strategy?

KEY questions:
1. Do these patients have GERD?
2. If they have GERD, what explains the lack of response?
TESTING FOR GERD: TARGETS

**Endoscopy**
- Erosive esophagitis present in only 1/3
- Random biopsies in nonerosive disease
  - Conventional histology poor to diagnose GERD
  - Useful to rule out eosinophilic esophagitis

**Laryngoscopy**
- Findings are subjective
- Inter and intra observer agreement suboptimal
- Recent ACG guideline: "A diagnosis of GERD should not be made based solely upon laryngoscopy"

*Katz, Gerson, Vela, Am J Gastroenterol 2013*
TESTING FOR GERD: REFLUX MONITORING

pH-monitoring

Purpose: answer 2 questions

- Is there an abnormal amount (pathological) of reflux?
- Is there an association between reflux episodes and symptoms?

5 cm above LES

WIRELESS pH MONITORING

- Improved patient comfort and acceptance
- Less restriction of diet and daily activities
- Prolonged monitoring: 48 – 96 hours
- Increased yield
CONVENTIONAL MONITORING: pH

ACID REFLUX

- In patients with ongoing symptoms despite adequate acid suppression
  Nonacid reflux?
- Reflux mechanism not changed

TESTING FOR WEAKLY ACIDIC or NONACID REFLUX

- pH testing
- Impedance-pH testing
The clinical value of impedance-pH monitoring is directly related to the relevance of weakly acidic or non-acid reflux.
21 studies involving 664 patients
- 374 patients on PPI / 382 patients off PPI

SYSTEMATIC REVIEW: ROLE OF ACID, WEAKLY ACIDIC AND WEAKLY ALKALINE REFLUX IN GERD

Symptom-related reflux episodes

Boecksxtaens and Smout Aliment Pharmacol Ther 2010;32:334
WEAKLY ACIDIC OR NON-ACID REFLUX: IS IT TREATABLE?

EFFECT OF BACLOFEN ON ACID AND NONACID REFLUX

- 18 subjects with heartburn
- Randomized crossover study: baclofen vs placebo

Vela, Aliment Pharmacol Ther 2003
Nissen Fundoplication in Refractory GERD

- 40 patients with heartburn / regurgitation despite PPI
- Impedance-pH monitoring:
  - on PPI before surgery
  - off PPI 3 months after fundoplication

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Before surgery</th>
<th>After surgery</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>LES tone, mmHg</td>
<td>13 (8–20)</td>
<td>19 (14–25)</td>
<td>0.001</td>
</tr>
<tr>
<td>Total refluxes</td>
<td>68 (45–94)</td>
<td>8 (4–17)</td>
<td>0.001</td>
</tr>
<tr>
<td>Abnormal %EAET</td>
<td>6 (16 %)</td>
<td>3 (8 %)</td>
<td>0.480</td>
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</tbody>
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Frazzoni Surg Endosc 2013
IMPEDEANCE-pH MONITORING

ISSUES AND UNANSWERED QUESTIONS

- No controlled studies of surgery for nonacid or weakly acidic reflux
- How best to define an abnormal test?
- What parameters predict response to therapy?

EVALUATION OF PPI-REFRACTORY SYMPTOMS

Guidelines for the Diagnosis and Management of Gastroesophageal Reflux Disease
