ACCIDENTAL BOWEL LEAKAGE: A PRACTICAL APPROACH TO EVALUATION

Tristi W. Muir, MD
Chair, Department of OB/GYN
Houston Methodist Hospital
Accidental Bowel Leakage
What Gets the Woman into Your Office

- 1/3 who have discussed ABL with provider were more likely to:
  - Have increased severity
  - Have had the problem longer
  - Have heard of the condition
  - Have PCP

Accidental Bowel Leakage - History

- **Characteristics**
  - Severity, onset, duration
  - Clinical subtype (passive, urge, fecal seepage)
  - Associated symptoms
  - Aggravating factors
  - Prior treatments
  - Detailed obstetrical/surgical history
  - Coexisting medical conditions
  - Medications
Questionnaires

Cleveland Clinic Incontinence Score (Wexner)

<table>
<thead>
<tr>
<th>Type of Incontinence</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Usually</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Liquid</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Gas</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Wears Pad</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Lifestyle alteration</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Cleveland Clinic Incontinence Score (Wexner)

• **Pros**
  - Widely-used
  - Practical
  - Easy to use and interpret

• **Cons**
  - Not validated in a prospective study
  - No cut-off values to equate to mild, moderate or severe incontinence
Quality of Life Scales

• Medical Outcomes Questionnaire (36-item)
• Gastrointestinal Quality of Life Index
• Fecal Incontinence Quality of Life Scale (FIQL)
Fecal Incontinence Quality of Life Questionnaire

Lifestyle: 2.64, 3.61
Coping-Behavior: 2.07, 3.29
Depression: 2.88, 3.74
Embarrassment: 1.99, 3.35

Bowel Diary

- Frequency
- Associated Symptoms
- Bristol Stool Chart
Continence Mechanism

- Anal sphincter
- Rectal sensation
- Rectal capacity
- Compliance
- Colonic transit time
- Stool consistency
- Cognitive/neurologic factors
Physical Examination

• How sensitive is your exam?
• What should you r/o when doing the exam?
• Picture of common etiologies (childbirth injury, medical (neurologic, GI) how do you cross them off your list? What puts them more prominently on your list?
• What are complications of fecal incontinence?
  • Rashes?
  • Urinary incontinence?
Correlation between the physical examination and monometry

- PPV of digital examination to identify low resting and squeeze pressure by experienced clinician was 67% and 81% respectively.

- Anorectal testing results led to alteration of diagnosis and treatment in 16% compared to history alone.

Testing

• Imaging (endoanal ultrasound, MRI?) what is best and why?
• Defecography?
• Manometry
• Pudendal nerve testing
• Other tests (when and why)
Imaging

- Endoanal ultrasound
- MRI
- Endoscopy
Endoanal ultrasound

Abdool A et al. Br J Radiol 2012;85:865-75
Endoanal Ultrasound

- Movie
Transvaginal and Transperineal Ultrasound

**Puborectalis**

**IAS & EAS**

**TVUS**

**TPUS**
How MRI Compare With Endoanal Ultrasound?

Defecography

What are looking for?

- Ability to retain the total volume of injected contrast without leaking
- The first leakage volume
- Total leaked volume
- Evaluate for possible enlarged or noncompliant rectal ampulla
Anorectal Manometry
Anorectal Manometry

- Measures anal canal and rectal pressures, rectal sensation and compliance
- Maximum squeeze pressure has the greatest sensitivity and specificity - <60 mm Hg
- Decreased resting and squeeze pressures have been found in 90% of patients with anal sphincter injury
- Can look at pressure profile during squeeze and compare to resting
  - If voluntary squeeze effort results in normal or increased pressure, the main deficiency resides in the internal anal sphincter. If the squeeze effort fails to raise the anal sphincter pressure, it must be assumed that the external anal sphincter is further compromised.
Neurophysiological Testing

- Pudendal nerve terminal motor latency-
- New testing on the horizon:
  - Cortical and motor evoked potentials of the rectum - evaluates the neural circuitry of afferent and efferent pathways
  - Transcranial magnetic stimulation evaluates the anal sphincter response to magnetic stimulation of the motor cortex
Fecal Incontinence Evaluation

1. PT with ABL
2. Digital rectal examination
3. Anal manometry and rectal sensitivity testing
4. Manometry normal?
   - Yes: Symptom improvement?
   - No: Anorectal imaging +/− anal EMG
5. Symptom improvement?
   - Yes: ABL not requiring further investigation
   - No: Functional fecal incontinence
6. Anorectal imaging +/− anal EMG
   - Yes: Nonfunctional fecal incontinence
   - No: Is weakness clearly explained by sphincter or nerve injury?
7. Is weakness clearly explained by sphincter or nerve injury?
   - Yes: Nonfunctional fecal incontinence
   - No: ABL not requiring further investigation
8. Is there fecal impaction?
   - Yes: Treat impaction and constipation
   - No: PT and behavioral modifications
9. PT and behavioral modifications
   - Yes: Treat diarrhea
   - No: Is there diarrhea?
10. Is there diarrhea?
    - Yes: Treat diarrhea
    - No: Is weakness clearly explained by sphincter or nerve injury?
The Bottom Line

- Only 1 in 3 women will approach their physician about ABL
- Continence is complex: History and PE should be comprehensive
- Questionnaires:
  - Use severity scale - Cleveland Clinic Incontinence Scale
  - QOL scale - FIQL
- Additional Testing:
  - Effectiveness of defecography is proven
  - Endo-anal ultrasound defines the anal sphincter anatomy and integrity
  - Manometry - may identify patients that will benefit from PT
  - Anal sphincter EMG (ouch!)