Dyssynergic Defecation is a Common Finding in Men with Chronic Constipation

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Background

- Dyssynergic defecation (DD) is a recognized cause of chronic constipation
- DD is characterized by the inability to coordinate a series of events necessary to achieve evacuation of stool from the rectum
- DD can be identified on Anorectal Manometry (ARM) & Balloon Expulsion Testing (BET) by:
  - Paradoxical contraction of the anal sphincter during simulated evacuation response to simulated defecation
  - Inability to pass a water filled balloon through the anal canal within a prescribed period of time

To assess the impact of age on gender on the diagnosis of dyssynergic defecation as defined by ARM & BET on adults with chronic constipation

Methods

Study Design

- Retrospective cohort study of all ARM+BET studies performed at the University of Michigan GI
- All studies performed in the Physiology Laboratory between 2002-2007
- 411 ARM studies and 370 BET studies reviewed
- 99% of studies performed by the same technician (JB)
- 97% of studies interrupted by the same physician (WDC)

Data Collection

- Age
- Gender
- Response to simulated defecation on ARM (recorded as normal or abnormal)
- Balloon expulsion test result (recorded as normal or abnormal)

Anorectal Manometry (ARM)

- Software: Sandhill Scientific
- Equipment: Mk II Manometric Perfusion Pump (Dentsleeve Proprietary Ltd.)
- Probe: Four-channel water perfused catheter (Mui Scientific)

Balloon Expulsion Test (BET)

- Universal balloon attached to the end of 14Fr catheter
- After insertion into the rectum, balloon filled with 50cc of sterile saline
- Normal – ability to pass the balloon seated on a commode in less than 1 minute

Statistics

- Chi-square testing performed on dichotomous variables

Results

<table>
<thead>
<tr>
<th>ARM &amp; BET findings by Gender</th>
<th>Overall</th>
<th>Age &lt; 65</th>
<th>Age ≥ 65</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Abnormal ARM</td>
<td>43%</td>
<td>48%</td>
<td>46%</td>
</tr>
<tr>
<td>Abnormal BET</td>
<td>43%</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>Both ARM &amp; BET abnormal</td>
<td>23%</td>
<td>64%</td>
<td>21%</td>
</tr>
</tbody>
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</tr>
<tr>
<td>Abnormal ARM</td>
<td>53%</td>
<td>62%</td>
<td>0.14</td>
</tr>
<tr>
<td>Abnormal BET</td>
<td>43%</td>
<td>39%</td>
<td>0.04</td>
</tr>
<tr>
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<td>24%</td>
<td>46%</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Summary

• Constipated men were twice as likely as constipated women to demonstrate dyssynergic defecation rigorously defined as abnormal ARM AND BET

• Constipated elderly adults (aged 65 & older) were more likely than constipated younger adults to demonstrate dyssynergic defecation

• Elderly men with constipation (aged 65 & older) had the highest prevalence of dyssynergic defecation (p < 0.01)

Conclusions

• Dyssynergic defecation is a common finding in men with refractory chronic constipation
  - Contrary to conventional wisdom, dyssynergia may be more common in men than women
  - The prevalence of dyssynergia was greatest in elderly men with refractory chronic constipation

• Clinicians should have a low threshold for ordering ARM + BET in men with chronic constipation failing empiric laxative therapy.