The Hard Truth: Myths and Facts About Opioid Induced Bowel Dysfunction

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Conflict of Interest

• Cara Brock declares no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.
Pharmacist Objectives

1. Describe the pathophysiology of opioid induced constipation (OIC).
2. Discuss nonpharmacologic interventions to prevent and manage constipation associated with opioid therapy.
3. Compare current treatment options for the management of opioid-induced constipation.
Pharmacy Technician Objectives

1. Describe the pathophysiology of opioid induced constipation (OIC).

2. Identify patients indicated for nonpharmacologic interventions to prevent and manage constipation associated with opioid therapy.

3. Recognize current treatment options for the management of opioid-induced constipation.
Pain and Opioids

• 3% of adults in the US are on long-term opioid therapy
• 250 million opioid prescriptions filled annually in the US
• Over 50% of cancer patients require opioids

Opioid Adverse Effects

• Sedation, euphoria, delirium
• Respiratory depression
• Suppression of cough reflex
• Nausea & vomiting
• Constipation
• Miosis
• Histamine release
Prevalence & Severity of OIC

Impact of Opioid Induced Bowel Dysfunction

> 50% report significant impact on QOL

Constipation 4 times/week

Prevalence decreases with dose

Frequency not dose dependent

35% miss, decrease or stop opioid due to GI side effects

# Bristol-type Stool Assessment Scale

## Bristol Stool Chart

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>Separate hard lumps, like nuts (hard to pass)</td>
</tr>
<tr>
<td>Type 2</td>
<td>Sausage-shaped but lumpy</td>
</tr>
<tr>
<td>Type 3</td>
<td>Like a sausage but with cracks on the surface</td>
</tr>
<tr>
<td>Type 4</td>
<td>Like a sausage or snake, smooth and soft</td>
</tr>
<tr>
<td>Type 5</td>
<td>Soft blobs with clear-cut edges</td>
</tr>
<tr>
<td>Type 6</td>
<td>Fluffy pieces with ragged edges, a mushy stool</td>
</tr>
<tr>
<td>Type 7</td>
<td>Watery, no solid pieces. Entirely Liquid</td>
</tr>
</tbody>
</table>

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Bowel Function Index

<table>
<thead>
<tr>
<th>Item</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of defecation in the last 7 days</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Feeling of incomplete bowel evacuation</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Patient’s personal assessment of constipation</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
</table>

Adapted from Validation of Drug Function Index to detect clinically meaningful changes in opioid induced constipation. Rentz AM, et. al. Journal of Medical Economics. (2009)
<table>
<thead>
<tr>
<th>Symptom</th>
<th>Patient Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal distension or bloating</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Change in the amount of gas passed</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Less frequent bowel movements</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Oozing liquid stool</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Rectal fullness or pressure</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Rectal pain with bowel movement</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Small volume of stool</td>
<td>None / Some / Severe</td>
</tr>
<tr>
<td>Unable to pass stool</td>
<td>None / Some / Severe</td>
</tr>
</tbody>
</table>

Bowel History

- Last time bowels were moved
- Describe normal bowel habits
- Presence of blood or mucous
- Additional symptoms
- Pain or nausea when moving bowels
- What has been tried to alleviate symptoms
• Functional constipation: ≥ 2 of the following:

- Straining
- Lumpy/hard stool (Bristol 1 & 2)
- Incomplete evacuation
- Feeling of anorectal blockage
- Manual maneuvers
- < 3 BM per week

Definition
Opioid Induced Constipation

- Change from baseline
  - Reduced frequency of spontaneous bowel movements
- Development or worsening of straining
- Incomplete evacuation
- Harder stool consistency

TREATMENT OF OPIOID INDUCED BOWEL DYSFUNCTION
Bulk Forming Laxatives

Stool Softeners

Stimulant Laxatives


Chloride Channel Activators

Peripherally Acting Mu-Opioid Receptor Antagonists (PAMORA)

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Methylnaltrexone (Relistor®)


http://www.empr.com/alerts/relistor/
Naloxegol (Movantik®)

## Comparison

<table>
<thead>
<tr>
<th>Medication</th>
<th>NNT</th>
<th>+SBMs/week over placebo</th>
<th>Extra BMs/month</th>
<th>Cost (30 days)</th>
<th>Cost per BM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>3</td>
<td>+2.7</td>
<td>11</td>
<td>$13-$39</td>
<td>$1.20-$3.50</td>
</tr>
<tr>
<td>Docusate</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>$16-$32</td>
<td></td>
</tr>
<tr>
<td>Senna</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>$3-$9</td>
<td></td>
</tr>
<tr>
<td>Lubiprostone</td>
<td>12</td>
<td>+0.9</td>
<td>3.6</td>
<td>$360</td>
<td>$100</td>
</tr>
<tr>
<td>Methylnaltrexone</td>
<td>3-5*</td>
<td>+0.6-1.6</td>
<td>2.4-6.4</td>
<td>$80/dose $1200</td>
<td>$80-$500</td>
</tr>
<tr>
<td>Naloxegol</td>
<td>5-9.7</td>
<td>+0.5-1</td>
<td>2-4</td>
<td>$297</td>
<td>$74-$148</td>
</tr>
</tbody>
</table>

*in CNCP patients

*Slide courtesy of Dr. Mary Lynn McPherson*
Take Home Points
www.squattypotty.com
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