Diagnosis and Management of Irritable Bowel Syndrome (IBS) For the Primary Care Provider

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Learning Objectives

• Recognize symptoms that should prompt the clinician to consider a diagnosis of irritable bowel syndrome (IBS)
• Briefly review a proposed diagnostic workup of a patient suspected to have IBS
• Discuss current available treatment approaches for IBS by subtype
What is irritable bowel syndrome?

- Chronic functional bowel disorder presents with symptoms of:
  - Abdominal pain
  - Bloating
  - Altered bowel habits
- Maybe associated with food

Am J Gastroenterol 2019;114:212–220
IBS is common

- Functional gastrointestinal disorders account for 40% of all referrals to gastroenterologists
  - IBS is the most common
  - Greatly impacts quality of life
  - Many cared for by their primary care provider
- Estimated that 12% of patients worldwide have IBS
- Young patients
- Female
IBS subtypes

IBS subtype based on the patients predominant bowel habits on days with abnormal bowel movements

- IBS with constipation (IBS-C)
- IBS with diarrhea (IBS-D)
- IBS with mixed symptoms of constipation and diarrhea (IBS-M)
- Unsubtyped (IBS-U)
Case

- 31 yo WF symptoms of recurrent abdominal pain and loose stools
- Symptoms have been present since she was in high school, waxed and wane
- Present for 2 years, worse within the last 6 months
- She reports occasional bloating
- Pain is related to defecation improved with defecation, happens at least 2-3 x per week
- Loose stools, 2-3 BMs per day
To diagnose IBS, apply the Rome IV criteria

- Must have abdominal pain
- Frequently associated with bloating
Diagnostic algorithm

1. Patient has chronic symptoms of abdominal pain associated with constipation, diarrhea, or both, with or without bloating.

2. Obtain history and perform physical examination (including medical, surgical, and dietary history and digital rectal examination).

3. If normal physical examination and no warning signs in history, apply Rome IV criteria.

4. Positive diagnosis of IBS is made.

5. Consider limited testing (CBC, CRP level, celiac serologic test, fecal calprotectin level).

6. Use Bristol Stool Form Scale to identify IBS subtype.

7. Initiate treatment based on predominant symptom.
All IBS Subtypes

CBC

Age-appropriate CRC screening

IBS-D
- CRP or fecal calprotectin
- tTG-IgA ± quantitative IgA
- When colonoscopy performed, obtain random biopsies
- SeHCAT, fecal bile acids, or serum C4 where available
- Anti-CdtB/antivinculin antibodies

IBS-M
- CRP or fecal calprotectin
- tTG-IgA ± quantitative IgA
- Stool diary
- Consider abdominal plain film to assess for fecal loading

IBS-C
- If severe or medically refractory, refer to specialist for physiologic testing
Back to our case

- Rest of the history is unremarkable
- Vital signs and physical exam normal
- Normal CBC
- Normal CRP
- Normal fecal calprotectin
- Negative celiac serologies
What Next???

- Bristol stool scale
- Initiate treatment based on symptom

**Rome IV Criteria for IBS**

Recurrent abdominal pain, on average, ≥1 day per week in the last 3 months, associated with ≥2 of the following:

- Related to defecation
- Change in frequency of stool
- Change in form (appearance) of stool

*Criteria should be fulfilled for the last 3 months, with symptom onset ≥6 months before diagnosis*

**IBS Subtypes Based on Bristol Stool Forms**

<table>
<thead>
<tr>
<th>IBS-C</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard/lumpy stools ≥25%</td>
<td></td>
</tr>
<tr>
<td>Loose/watery stools &lt;25%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IBS-M</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard/lumpy stools ≥25%</td>
<td></td>
</tr>
<tr>
<td>Loose/watery stools ≥25%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IBS-D</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard/lumpy stools &lt;25%</td>
<td></td>
</tr>
<tr>
<td>Loose/watery stools ≥25%</td>
<td></td>
</tr>
</tbody>
</table>
Dietary and lifestyle modifications first line treatment for IBS

- Reassurance
- Fiber
  - Traditional first line treatment
  - Insoluble fiber (bran) exacerbate pain and bloating
- Dietary modifications
  - Low FodMap diet
  - Gluten free diet
- Others
  - Cognitive behavioral therapy
  - Hypnotherapy
  - Acupuncture
  - Yoga

FODMAPs

Fermentable
Oligosaccharides – few simple sugars linked together (fructans, galactans)
Disaccharides – double sugar (lactose)
Monosaccharides – single sugar (fructose)
And
Polyols – sugar alcohols (sorbitol, mannitol, isomalt, xylitol, glycerol)

Van Dam, L. The Low FODMAP Diet for IBS {Powerpoint slides}. This can be retrieved from https://medicine.umich.edu/sites/default/files/content/downloads/The%20Low%20FODMAP%20Diet%20for%20Managing%20IBS%20Lauren%20Van%20Dam.pptx
- Short chain carbohydrates
- Poorly absorbed in the small intestine & delivered to the colon
- **Rapidly fermentable** by gut bacteria resulting in gas and SCFA
- Small, **osmotically active** molecules increasing water load to the colon
- Cumulative effect of FODMAPs produces symptoms in IBS patients

Van Dam, L. The Low FODMAP Diet for IBS (Powerpoint slides). This can be retrieved from https://medicine.umich.edu/sites/default/files/content/downloads/The%20Low%20FODMAP%20Diet%20for%20Managing%20IBS%20Lauren%20Van%20Dam.pptx
• 2 stage diet likely explained best by a dietitian

https://digestivecarephysicians.com/low-fodmap-diet/
Welcome to My Nutrition Health

This site will help you answer all of your questions about FODMAPs. Since FODMAPs can be difficult to understand, we’ve made animations to help you. They really help!
What about probiotics?

- Growing evidence about the role of dysbiosis of the gut flora and its role in IBS
- As a class, possible benefits for global symptoms, bloating, gas
- Unable to recommend a specific strain/species or formulation
Medications for treating pain in IBS

- Peppermint Oil
- Antispasmodic Drugs
- Antidepressants
- Drugs acting on opioid receptor
### Medications used for treatment of IBS with diarrhea

- **Loperamide**
- **Bile acid sequestrants**
- **5-HT3 Receptor Antagonists**
- **Antibiotics**

### Table 2.
Overview of Pharmacologic Therapies for IBS-D

<table>
<thead>
<tr>
<th>Agent(s)</th>
<th>Quality of Evidence</th>
<th>Treatment Benefits</th>
<th>Most Common Adverse Events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antispasmodics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Various</td>
<td>Low</td>
<td>Some agents improve global symptoms and pain</td>
<td>Dry eyes/mouth, sedation, constipation</td>
</tr>
<tr>
<td>Peppermint oil</td>
<td>Moderate</td>
<td>Improves global symptoms and cramping</td>
<td>Heartburn, dyspepsia, constipation</td>
</tr>
<tr>
<td><strong>Antidepressants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCAs</td>
<td>High</td>
<td>Improve global symptoms and pain</td>
<td>Dry eyes/mouth, sedation, constipation</td>
</tr>
<tr>
<td><strong>5-HT3 Antagonists</strong></td>
<td></td>
<td></td>
<td>Constipation, rare ischemic colitis</td>
</tr>
<tr>
<td>Alosetron</td>
<td>Moderate</td>
<td>Improves global, abdominal, and diarrhea symptoms in women with severe IBS-D</td>
<td></td>
</tr>
<tr>
<td><strong>Opioid Receptor Modulators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loperamide</td>
<td>Very low</td>
<td>Beneficial for diarrhea, but not for global symptoms or pain</td>
<td>Constipation</td>
</tr>
<tr>
<td>Eluxadoline</td>
<td>High</td>
<td>Improves global symptoms</td>
<td>Constipation, nausea</td>
</tr>
<tr>
<td><strong>Antibiotics</strong></td>
<td>Moderate</td>
<td>Improves global symptoms, pain, and bloating</td>
<td>Similar to placebo</td>
</tr>
<tr>
<td><strong>Probiotics</strong></td>
<td>Low</td>
<td>As a class, possible benefits for global symptoms, bloating, and gas, but unable to recommend specific probiotic strains or formulations</td>
<td>Similar to placebo</td>
</tr>
</tbody>
</table>

IBS-D, diarrhea-predominant irritable bowel syndrome; TCAs, tricyclic antidepressants.
But what if the predominant symptom is constipation?
Table 3: Overview of Pharmacologic Therapies for CIC and IBS-C \(^8,20,36\)

<table>
<thead>
<tr>
<th>Agent(s)</th>
<th>Quality of Evidence</th>
<th>Treatment Benefits</th>
<th>Most Common Adverse Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psyllium</td>
<td>Low</td>
<td>Moderate</td>
<td>Improves stool consistency and frequency, and provides overall symptom relief in IBS-C</td>
</tr>
<tr>
<td>Laxatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stimulants</td>
<td>Moderate</td>
<td>No RCTs</td>
<td>Sodium picosulfate and bisacodyl are effective in CIC</td>
</tr>
<tr>
<td>PEG</td>
<td>High</td>
<td>Very low</td>
<td>Improves constipation, but not global symptoms or pain in IBS-C</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>SSRIs</td>
<td>High</td>
<td>Improve global symptoms and pain; appropriate for patients with prominent anxiety</td>
</tr>
<tr>
<td>Prosecretory Agents</td>
<td>Lubiprostone</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Linaclotide</td>
<td>High</td>
<td>High</td>
<td>Improves global, abdominal, and constipation symptoms</td>
</tr>
<tr>
<td>Plinecanide</td>
<td>High</td>
<td>High</td>
<td>Improves global, abdominal, and constipation symptoms</td>
</tr>
</tbody>
</table>

CIC, chronic idiopathic constipation; IBS-C, constipation-predominant irritable bowel syndrome; PEG, polyethylene glycol; RCTs, randomized controlled trials; SSRIs, selective serotonin reuptake inhibitors.
Learning Objectives

• Recognize symptoms that should prompt the clinician to consider a diagnosis of irritable bowel syndrome (IBS)
• Briefly review a proposed diagnostic workup of a patient suspected to have IBS
• Discuss current available treatment approaches for IBS
Thank you!
References

• https://www.monash.edu/medicine/ccs/gastroenterology/fodmap
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