Exploring Gut-Brain Therapies

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Disclosures

• Speaker, Abbvie (Physician Education)
• 100% Ownership, Oak Park Behavioral Medicine LLC

The Fellowship of the Gut-Brain

“The past decade has seen a paradigm shift in our understanding of the brain-gut axis. The exponential growth of evidence detailing the bidirectional interactions between the gut microbiome and the brain supports a comprehensive model that integrates the central nervous, gastrointestinal, and immune systems with this newly discovered organ. Data from preclinical and clinical studies have shown remarkable potential for novel treatment targets”

Integration of Psychogastroenterology
Integration of Psychogastroenterology

The Shire: Gut Directed Hypnotherapy

- First applied to IBS in 1984 by Dr. Peter Whorwell and colleagues
- ~30 RCTs across the DGBI spectrum of disease in both pediatric and adult patient groups
- 80% of females and 62% of males achieve at least a 50 point improvement in IBS symptom severity
- 73% of patients with functional dyspepsia respond and maintain response at 12 month follow up
- NNT = 3-4

The Shire: GDH Myths & Misconceptions

- Nearly half of patients referred to GDH have negative perceptions about the treatment
- This is not maintained after treatment
- Negative perceptions do not impact GDH outcome
- Is this a messaging problem?

The Shire: GDH Demystified

- 30-60 minute visits over 6 to 12 weeks + home practice
- Induce a deep state of relaxation making the mind and body open to “suggestions” and empower the patient to control gut symptoms
- Guided muscle relaxation + deep breathing
- Use of imagery (beaches, gardens, lakes, streams)
- Use of metaphor (bloating: your gut is like a balloon that you can choose to deflate)
- Use of repetition (You have control over your gut)
- Therapist voice + pacing of speech
The Shire: GDH Patients

- Moderate to severe symptoms
- Most DGBI conditions
- Any age
- Patients over 50 may have less, but still a good, response
- Absence of significant psychopathologies (e.g. active PTSD, history of psychosis)
- May be best to try after diet modification for dual approach to symptom severity

The Shire: GDH Mechanisms

<table>
<thead>
<tr>
<th>UPPER GI TRACT</th>
<th>LOWER GI TRACT</th>
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<tbody>
<tr>
<td>Modulate acid secretion</td>
<td>Modulate post-prandial gastrocolic reflex</td>
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<tr>
<td>Accelerate gastric emptying</td>
<td>Modulate colonic motility</td>
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<tr>
<td>After oro-cecal transit time</td>
<td>Reduce visceral hypersensitivity</td>
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<table>
<thead>
<tr>
<th>BRAIN</th>
<th>EFFECT</th>
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<tbody>
<tr>
<td>Posterior insula</td>
<td>Normalization of invoked response to painful stimuli</td>
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<tr>
<td>Anterior cingular cortex</td>
<td>Altered response to painful stimuli</td>
</tr>
<tr>
<td>Prefrontal &amp; somatosensory</td>
<td>Altered emotional response to pain</td>
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Rohan: Cognitive-Behavioral Therapy

- First applied to IBS in 1992 by Dr. Ed Blanchard and colleagues
- ~20 RCTs across DGBI spectrum of disease in both pediatric and adult patient groups
- 40% to 65% of IBS patients achieve significant symptom reduction
- NNT = 4-5

Rohan: Cognitive-Behavioral Therapy Delivery

- In Person
- Remote (Phone or Online)

Rohan: CBT Delivery

- IBS Symptoms
- Work & Social Adjustment

Rohan: CBT Patients

- Moderate to severe symptoms
- Some insight into the role of stress in DGBI symptoms
- Adolescents and adults, modifications needed for < 12
- Absence of significant psychopathologies (e.g. cognitive impairment, history of psychosis)
- Some cognitive flexibility

Rohan: CBT Mechanisms

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>OUTCOME</th>
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<tr>
<td>Psychoeducation</td>
<td>Increases likelihood patient will buy into CBT by increasing insight into role of stress/lifestyle</td>
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<tr>
<td>Relaxation</td>
<td>Engage PNS to downregulate pain thresholds, normalize gut function</td>
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<tr>
<td>Training</td>
<td>Cognitive Restructuring: Reduce Sx related anxiety, hypervigilance, catastrophizing, probability over-estimation</td>
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<tr>
<td>Problem Solving</td>
<td>Engage in emotion-focused coping vs. problem-focused coping</td>
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<tr>
<td>Exposure</td>
<td>Reduce avoidance and “safety” behaviors</td>
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Mordor: Acceptance & Commitment Therapy

- First applied to IBS in 2017 by Dr. Nuno Ferreira and colleagues
- No RCTs to date
- Preliminary data are promising
- Medium effect sizes for reduction in IBS symptom severity, improvement of quality of life, and reduction in avoidance behaviors and symptom anxiety


Mordor: ACT Mechanisms

Acceptance
- Valued: What matters to you most in your life
- Orient to: Accept the experience of the moment

Self as Context
- Sensations, thoughts, and events as simply data points in your life

Values
- What do you want your life to be about?
Mordor: Mindfulness-Based Stress Reduction

- First applied to IBS in 2009 by Dr. Bill Whitehead and colleagues
- 1 RCT to date
- Preliminary data are promising
- 26% to 31% reduction in symptom severity compared to wait-list controls (5% to 6%)
- Benefits seem to last for at least 6 months

Rohan: ACT or MBSR Patients

- Moderate to severe symptoms
- Some insight into the role of stress in DGBI symptoms
- Adolescents and adults, modifications needed for < 12
- Absence of significant psychopathologies (e.g., cognitive impairment, history of psychosis)
- Some cognitive flexibility

In Real Middle Earth Practice

- GDH, CBT, ACT, & MBSR are primary Gut-Brain therapies within Psychogastroenterology
- While each uses somewhat different methods, all target ANS pathways
- Most patients can engage in these treatments and roughly 65% will see improvement
- Head to head trials of each treatment could gauge which is superior
- Having a trusted team to deliver Gut-Brain interventions is key

End of the Journey

- Most private insurance and Medicare covers DGBI therapy
- The leaders in Psychogastroenterology are acutely aware of the dearth of therapists
- Visit the Rome Psychogastroenterology website to find therapists info on DGBI therapy: romeigpsych.org

Thanks!