Disorders of Gut-Brain Interaction associated with Abdominal Pain (DGBI-APs) in Primary Care: Integrating Psychological Approaches

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Faculty Disclosures

- I have no relevant financial relationships with the manufacturers(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.
- I will give a balanced presentation using the best available evidence to support my conclusions and recommendations.
- I do intend to discuss/refer to medications which have not been FDA approved for the use of pediatric DGBIs.

Roadmap

- What are DGBI-APs?
- Associated Conditions – Rumination + ARFID
- Algorithm for DGBI-AP Medical Decision-Making
- Treatment Approaches for Rumination + ARFID
- Psychosocial Considerations & Treatments for DGBI-APs

What can the PCP do in their office?
Learning Objectives

At the conclusion of the presentation, participants should be able to:
• Identify at least 3 potential psychosocial targets of assessment, and
• Describe at least 3 psychological treatment tools that can be used for pediatric DGBIs (and associated conditions) in primary care.

Nomenclature

1950s – “recurrent abdominal pain”

1990s – “functional GI disorders”
  • 1989 – Rome I
  • 1998 – Rome II
  • 2006 – Rome III
  • 2016 – Rome IV

2020s – “disorders of gut-brain interaction”
  • 2026 – Rome V (expected)

2023 – Rome IV – 33 FGIDs/DGBIs, not all associated with pain

Why should we care about DGBIs?
Negative Costs to Patient, Family, System

Healthcare/System cost
• 45% of pediatric GI visits
• 5% of general pediatrician visits
• ER visits, hospital days

Family cost
• Missed workdays
• Financial instability
• Family/caregiver stress

Patient cost
• Lower quality of life
• Persists into adulthood for many

The Cost of Waiting

NORMAL DEVELOPMENTAL TRAJECTORY

Identified Physiologic Contributors to DGBIs

1. Motility disturbance
2. Visceral hypersensitivity
3. Altered mucosal and immune function
4. Altered microbiota
5. Altered CNS processing

Sleep
Social (peer, family)
Coping skills
Emotional functioning
School/learning
Evidence Based Algorithm for Chronic Abdominal Pain Presenting in Primary Care

Rome IV DGBI-APs
- Functional Dyspepsia
- Irritable Bowel Syndrome
- Functional Abdominal Pain NOS
- Abdominal Migraine

But, what about the Psychosocial Stuff?

#1: Acknowledge that symptoms are real.
- Avoid dichotomizing abdominal pain (or other symptoms) as either medical OR psychological.
- From the beginning, emphasize the complex interaction of physical and psychological factors in causing and/or maintaining chronic GI symptoms.
- Help families understand that pain ≠ danger in DGBIs.
- Provide reassurance with sufficient gravitas. Families may not immediately feel that “negative” findings is good news.
#2: DGBI treatment should be multi-faceted.

- Most patients’ GI symptoms will need to be treated from a variety of perspectives.
- This will likely include (but may not be limited to) appropriate testing and medication, stress management, sleep intervention, and school support.
- Interventions done simultaneously (rather than sequentially) can maximize therapeutic effect.

#3: Focus on functioning first.

- Complete pain elimination not always practical initial goal of tx.
- Improvement in functioning often precedes improvement in pain.
- Providers should stay positive and recognize improvements in functioning, but keep your enthusiasm tempered. Remember that improvement in function does not necessarily mean improvement in pain, which is likely your patient’s primary goal.

Your DGBI Psychosocial Toolkit

- Parent coaching
- School intervention
- Sleep hygiene
- High level coping guidance

- Shift to “coach” from “parent”
- Maintain emotional calm
- Use neutral language
- Model/prompt positive coping
- Scaffold for success
- Reward effort to maintain momentum
- Celebrate small victories
Your DGBI Psychosocial Toolkit

- Parent coaching
- School intervention
- Sleep hygiene
- High level coping guidance

- Emphasize attending all activities daily regardless of symptoms.
- Encourage families to request a 504 plan and be prepared to provide supporting documentation to improve bathroom access, "coping" breaks, not sending home for "symptoms as usual".
- If "ping pong" pattern, consider temporary reduction to half days with plan to increase time over several weeks.

- Emphasize need for 8-9 hours of good quality sleep nightly.
- Review basic sleep hygiene recommendations:
  - No screens in last 30 minutes before bedtime.
  - No naps (max 1 hour early pm).
  - Use bed only for sleeping.
  - Consistent bedtime/waketime (even on weekends).

Proactive and brief - NOT total avoidance.
**Behavioral Health Interventions**

**Brief, in PCP office:**
- Parent coaching
- School intervention
- Sleep hygiene
- High level coping guidance

**Refer out to psychology:**
- Relaxation/biofeedback training
- Cognitive-behavioral therapy
- More significant sleep issues
- Significant school avoidance, learning, bullying, etc. issues
- Increased parental support/guidance needed

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**Other Common Multidisciplinary Interventions**

- Physical Therapy
- Psychiatry
- Alternative/complementary therapies for pain, e.g.:
  - Yoga
  - Acupuncture
  - Massage
- Family therapy

**Other non-routine care to consider:**
- Habit reversal (Rumination)
- Diet expansion (ARFID)
- Pain rehabilitation program (APS)

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**Take homes for primary care practice:**

- Use Rome criteria in making pediatric DGBI diagnoses.
- Be proactive and take an early intervention approach.
- Consider using the CM algorithm for initial medical testing and medication management.
- Approach “reassurance” with appropriate gravitas.
- Employ biopsychosocial conceptualization early in conversations with patients and families.
- Use the “DGBI Psychosocial Toolkit” from the start of treatment.
- Refer for additional support as needed.
But, sometimes specific issues can persist after pain resolves...

**Rumination + Avoidant-Restrictive Food Intake Disorder**

**Associated Disorders: Rumination**

**Rumination Syndrome – Rome IV Diagnostic Criteria**

*Must include all of the following:*

1. Repeated regurgitation and rechewing or expulsion of food that:
   • Begins soon after ingestion of a meal
   • Does not occur during sleep
2. Not preceded by retching
3. After appropriate evaluation, the symptoms cannot be fully explained by another medical condition. An eating disorder must be ruled out.

*Criteria fulfilled for at least 2 months prior to diagnosis*

**Peristalsis vs. Rumination**

Rumination occurs due to a reversal of the esophagogastric pressure gradient.
Types of Rumination

Self-Stimulation/Self-Soothing
- Young (generally <8 years) age
- Neurodiverse
- Developmental Differences/Delays

Habit Disorder
- Older (8 or older) age
- Neurotypical

Development of a Habit: Rumination

Core Components of HRT
1. Psychoeducation
2. Awareness
3. Suppression
4. Maintenance
Psychoeducation
Demystifies/pathologizes the habit and sets context for acceptance of behavioral approach to care.

**GOAL:** To understand how a repetitive symptom is developed/maintained, connect to patient history, and promote engagement in treatment.

**Application:** Explain relevant structure/function (e.g., stomach, esophagus), habit development, rationale for HRT

- Can take time and persistence, so buy in critical

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Awareness
Increased awareness of repetitive behaviors facilitates better self-control.

**GOAL:** To develop the ability to reliably detect “premonitory urge” and/or high risk situations for behavior to occur.

**Application:** Track timing, location, and frequency with which the repetitive behavior occurs:
- Gain awareness of patterns of behavior (typically highest risk 30-60 minutes after meals)
- Identify “premonitory urge” or sensations that precede behavior to help catch at other times

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Suppression
Engaging in one behavior will prevent or suppress another behavior.

**GOAL:** To find and use a competing response (CR) that is physically incompatible with the target behavior.

**Application:** Trial potential CRs for the target behavior in session and/or in home environment during the following times:
- When “premonitory urge” noticed, until it passes; and/or
- When patient enters identified high risk situation, for a specified duration or until the situation ends.
Suppression

- Can do it anywhere
- Does not require props (preferred)
- Can be actioned for more than 1 minute
- Must be incompatible with the behavior to be extinguished
- Must be more socially acceptable than the behavior to be extinguished

Examples:
- Sucking a peppermint or other hard candy, chewing gum, effortful swallow, diaphragmatic breathing or other diaphragmatic control (e.g., singing, debate, reading aloud), etc.

Maintenance

- By suppressing the behavior over time, the habit is weakened or broken entirely.

**GOAL:** To help the body learn to tolerate the normal sensation of transient discomfort and lose the "hyper-reactive" response.

**APPLICATION:** Perform small trials to determine whether the CR is still needed at certain times and/or in certain situations:
- Simple forgetting
- Identification of lower risk times to delay CR
- Shifting from routine use to "on demand" when precursor sensation felt
- Substituting weaker CRs for stronger ones

Where does relaxation training fit in?

**GOAL:** Increase in anxiety can lead to increases in frequency, intensity, and duration of repetitive behaviors.

**APPLICATION:** In addition to potential CRs, can reduce overall anxiety/physiologic arousal.

**APPLICATION:** Relaxation training (e.g., deep breathing, PMR, imagery) can be taught with biofeedback:
- Daily to maintain "calm" and balanced nervous system function (rest and digest vs. fight or flight) and/or
- As needed for specific stress and anxiety management "in the moment".
Sample Plan – Rumination

1. Practice deep breathing 2-3x daily for 5-10 minutes.
2. Suck on a peppermint or other hard candy for 30-60 minutes after each meal.
4. Reswallow all regurgitant.
5. Repeat Steps 3 and 4 as often as necessary throughout the day.

The goal is to suppress the regurgitation as completely as possible to break the habit more quickly/efficiently.

Associated Disorders: ARFID

Avoidant Restrictive Food Intake Disorder – DSM-5 Diagnostic Criteria

An eating or feeding disturbance with persistent failure to meet appropriate nutritional and/or energy needs. Must include one or more of the following:

• Significant weight loss, failure to achieve expected weight gain, or faltering growth
• Significant nutritional deficiency
• Dependence on enteral feeding or oral nutritional supplements
• Marked interference with psychosocial functioning

Not better explained by:

• Lack of available food or by an associated culturally sanctioned practice
• Another eating disorder (e.g., anorexia nervosa or bulimia)
• A concurrent medical condition or another mental disorder

Why is my patient still so picky?

Common causes of ARFID post DGBI-AP:

• Fear of symptoms returning
• One trial learning
• Missed sensitive period of development
• Developing a secondary eating disorder

Pre-existing anxiety and/or sensory sensitivities can further complicate
ARFID Stages of Treatment

1. Psychoeducation
2. Assessment/Planning
3. Active Treatment
4. Relapse Prevention

Can be relatively simple to complex, and take varying lengths of time depending on:
- Degree of underweight
- Motivation level of child/parent
- Presence of anxiety, sensory sensitivities, etc.

Psychoeducation

Demystifies/de-pathologizes the selective/avoidant behavior and sets context for acceptance of behavioral approach to care.

GOAL: To understand how restrictive eating patterns develop and are maintained, connect to patient history, and promote engagement in treatment.

Application:
- Psychoeducation on ARFID + tx
- Establishing regular pattern of eating to normalize hunger cues
- Making meals enjoyable/social events
- Self/Parent monitoring of food intake

Assessment

Tailoring of treatment plan is necessary to address individual contributing factors and differing goals.

GOAL: To develop a plan for increasing food volume/variety considering current state and perceived initiating/maintaining factors.

Application:
- Determine how ARFID is impacting patient/family life
- Establish priorities in terms of missing flavors, textures, nutrients, and/or culturally important foods
- Identify any associated issues to target
Active Treatment

Repeated exposure in manageable steps is key to success.

**GOAL:** Slowly increase tolerance of greater volume and/or variety of foods thereby improving nutritional status, growth, and psychosocial function.

**Applications:**
- Sensory sensitivity: 5 step food exploration, focus on “near neighbor” novel foods
- Fear: Development of a fear/avoidance hierarchy, graded exposure to feared foods and/or situations
- Lack of interest/appetite: Slow increase in volume to improve tolerance of normal somatic sensation using highly preferred foods

Active Treatment Components

Common across all types:
- Use of contingencies (rewards/consequences) to increase motivation and build new associations
- Reduced caregiver coercion and/or attention to negative behaviors
- Pleasant, social, scheduled mealtimes
- Presentation of both preferred and non-preferred/novel foods on table
  - May be family style or on patient’s plate
  - May use a “no thank you” cup
- Repeated presentation (up to 15 exposures) expected for each new food
- Encourage involvement of patient in pleasant non-eating interactions with foods

What’s a “near neighbor”? 

Only one attribute changes at a time, e.g.:
- Flavor: Green pepper to green bean
- Color: Green pepper to red pepper
- Taste: Green pepper fixed a different way than usual/preferred
- Texture: Green pepper integrated into a preferred meal rather than served separately
When can we shift to relapse prevention?

- No longer underweight (able to grow)
- Eating at regular intervals (3 meals + snacks)
- Regularly incorporating foods that will help correct any nutritional deficits
- Primary ARFID contributors partially to fully resolved
- Caregivers capable of continuing at-home strategies until resolution of clinical impairment

Relapse Prevention

**GOAL:** To help the family maintain and expand on treatment gains on their own over the long-term.

**Application:**
- Discontinue regular monitoring
- Co-create plan for maintaining gains
- Develop plan for continuing to learn about/expand diet with new foods
- Anticipate any specific challenges
- Talk about when to seek help

Take homes for primary care practice:

* Address the DGBI-AP first
* Provide psychoeducation
* Refer out when needed