Functional Abdominal Pain

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Resident Education Series

Reviewed by Melissa Jensen, MD of the Professional Education Committee

Case

- 14 y/o female with weekly periumbilical pain that improves after bowel movements for the past 3 months
  - What additional information would you like to know?
  - What are your next steps?

Presentation

- Pain at least weekly longer than 2 months
- May be associated with disability
  - Missing school, stopping activities
  - Other pain, headache, sleep disturbance
  - Decreased quality of life, depression, anxiety
- No warning signs

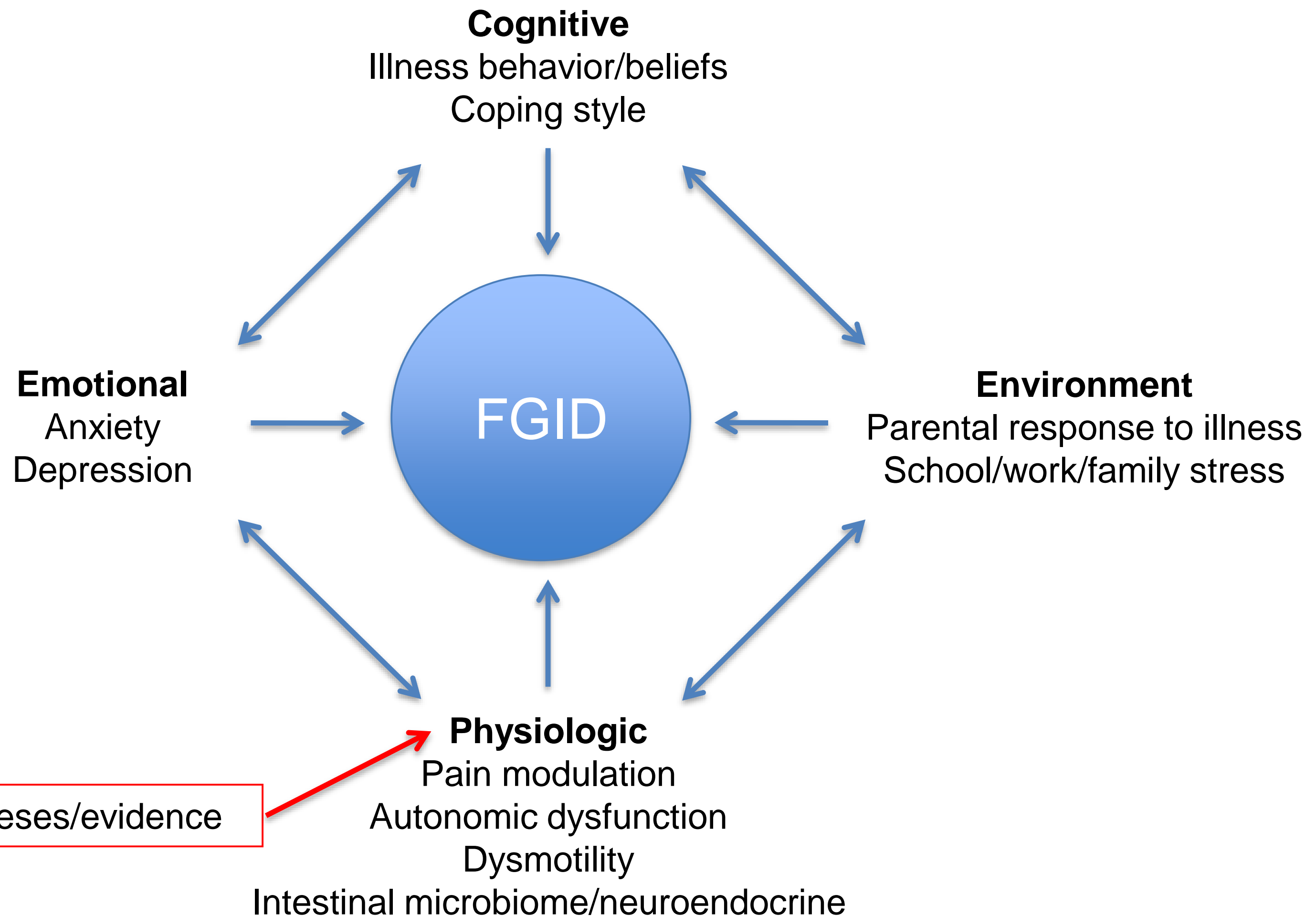
Presentation

Warning signs of disease other than FGID	
Weight loss	Oral ulcers
Unexplained fever	Dysphagia
Pain radiating to back	Unexplained rashes
Bilious emesis	Nocturnal symptoms
Hematemesis	Arthritis
Hematochezia/melena	Anemia/pallor
Chronic diarrhea	Delayed puberty
Family history of IBD	Slowed linear growth velocity

Classification

- ~~Non-organic~~ ~~Psychiatric~~ ~~Made up/Faking~~
- **Functional Intestinal Disorders (FGID)**
  - body's normal activities (ie. motility, visceral sensation) **are** impaired, but no abnormality can be identified on diagnostic blood tests, radiography, or endoscopy
  - **symptom-**based diagnosis
  - mechanism unknown
    - possible dysmotility, inflammation, central or peripheral sensitization
  - etiology unknown
    - possible impact of early life events, infection, psychosocial, genetics

Classification
Biopsychosocial Model



Frequent new hypotheses/evidence

Adapted from Mayer EA. Am J Med 1999;107(5A):13S

Diagnosis

- Symptom-based diagnostic criteria
- **If** no red flags, and **if** Rome criteria are met, **no diagnostic tests** recommended
  - consider likelihood of differential given symptoms and age
  - consider relatively prevalent diagnoses
    - celiac disease, lactose intolerance, h. pylori
  - avoid unnecessary expense and risk

Diagnosis

- Rome Foundation

http://www.romecriteria.org/

  - Nonprofit, first diagnostic criteria in 1989
  - International expert panel, consensus model
    - Adult and pediatric, separate recommendations
    - Current recommendations from Rome-III (2006)
    - Next recommendations in 2014
  - Symptom-based criteria
    - Diagnostic Questionnaire for the Pediatric Functional Gastrointestinal Disorders (QPGS-III)

Diagnosis
Rome III Pediatric Criteria

- Functional dyspepsia

Upper abdominal pain or discomfort several times weekly or more
Duration 2 months or longer
Not exclusively relieved with defecation
Not associated with change in stool form or frequency

- Irritable bowel syndrome

Upper or lower abdominal pain once weekly or more
Duration 2 months or longer
At least sometimes relief with defecation and change in stool form/frequency

- Abdominal migraine

Severe abdominal pain lasting 1 hour or longer and restricting activities
At least twice in last year, symptom free period
Specific associated symptoms (anorexia, n/v, pallor, HA, photophobia)

- Functional abdominal pain

Upper or lower abdominal pain once weekly or more
Duration 2 months or longer
Does not fit other diagnosis

- FAP syndrome

Upper or lower abdominal pain several times weekly or more
Duration 2 months or longer
Misses activities at least once in a while
OR at least 2 somatic symptoms weekly:
HA, insomnia, pain in arms/legs/back, faint or dizzy

- Functional constipation
- Nonretentive fecal incontinence
- Aerophagia
- Cyclic vomiting syndrome
- Adolescent rumination syndrome

Not abdominal pain syndromes

Treatment

- Reassurance and education!
  - Eliminate fear of unknown
- Validate that symptoms are real, but not dangerous
  - For sake of patient and parent
  - Return to regular activities and return to school
- Biopsychosocial approach
- Evidence for medical therapies in pediatrics is not strong
  - Mostly extrapolated from adult data
  - Weigh risk vs. *possible* benefit
  - Short trial of empiric therapy and discontinuation if no response

Treatment
Psychotherapy

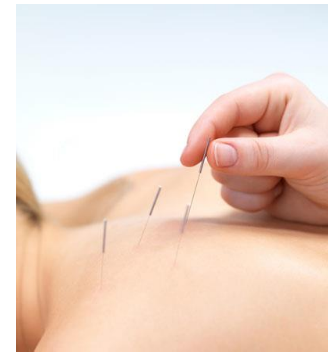
- Biofeedback
- Relaxation
- Family therapy
- Hypnotherapy
- Cognitive behavioral therapy

Treatment
Dietary

- Low-FODMAP
  - **F**ermentable **O**ligosaccharides, **D**isaccharides, **M**onosaccharides, **A**nd **P**olyols
  - Poor absorption and rapid fermentation
- Fiber
  - either supplement or low fiber
- Specific elimination
  - Gluten
  - Lactose

Treatment
Complementary

- Peppermint Oil
- Probiotics
- Acupuncture
- Massage / Reflexology
- Yoga
- Placebo



Therapy
Pharmacologic

- SSRI, tricyclic antidepressant (TCA)
  - Amitriptyline (Elavil) best studied in pediatrics (no effect)
  - Lower dose than used for depression
  - EKG prior to TCA treatment to evaluate for long QT syndrome
- Prokinetics
  - EES (Eryped), metoclopramide (Reglan)

Therapy
Pharmacologic

- Anticholinergics
  - Dicyclomine (Bentyl), Hyoscyamine (Levsin)
  - Cyproheptadine (Periactin), also antiserotonergic
- H_2 blocker, proton-pump inhibitor
- Analgesics (ie. NSAID, opioid)
  - Typically not necessary/effective

Therapy
Specific to Abdominal Migranes

- Similar to headache migraine therapy

- Abortive
  - Ondansetron (Zofran)
  - Sumatriptan (Imitrex)

- Prophylactic
  - Amitriptyline
  - Cyproheptadine
  - Propranolol
  - Phenobarbital

Prognosis

- 1/3 of children with FGID may have IBS as adults
- Expensive
  - Missed school/work, unnecessary diagnostic tests
- Debilitating
  - Decreased QoL, depression, anxiety
- However, most improve over time
  - No validated predictors of disease course

Case Follow-up

- 14 y/o female with weekly periumbilical pain that improves after bowel movements
  - Met Rome III criteria for irritable bowel syndrome
  - Treated with dietary modifications and relaxation psychotherapy with improvement in symptoms

Summary

- FGIDs are symptom-based diagnoses
- If no “red-flags”, few/no diagnostic tests needed
- Etiology is multifactorial, incompletely understood
- Many therapies available, but evidence is limited
- Consider needs/desires of patient and family and use biopsychosocial approach

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