# Appendix A

Rome III

Diagnostic

Criteria for

**Functional** 

Gastrointestinal

Disorders

# A. Functional Esophageal Disorders

### AI. Functional Heartburn

Diagnostic criteria\* Must include **all** of the following:

- 1. Burning retrosternal discomfort or pain
- Absence of evidence that gastroesophageal acid reflux is the cause of the symptom
- 3. Absence of histopathology-based esophageal motility disorders
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# A2. Functional Chest Pain of Presumed Esophageal Origin

Diagnostic criteria\* Must include **all** of the following:

- 1. Midline chest pain or discomfort that is not of burning quality
- 2. Absence of evidence that gastroesophageal reflux is the cause of the symptom
- 3. Absence of histopathology-based esophageal motility disorders
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# A3. Functional Dysphagia

Diagnostic criteria\* Must include **all** of the following:

- Sense of solid and/or liquid foods sticking, lodging, or passing abnormally through the esophagus
- 2. Absence of evidence that gastroesophageal reflux is the cause of the symptom
- 3. Absence of histopathology-based esophageal motility disorders
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

#### A4. Globus

- Persistent or intermittent, nonpainful sensation of a lump or foreign body in the throat
- 2. Occurrence of the sensation between meals
- 3. Absence of dysphagia or odynophagia
- 4. Absence of evidence that gastroesophageal reflux is the cause of the symptom
- 5. Absence of histopathology-based esophageal motility disorders
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# **B.** Functional Gastroduodenal Disorders

#### **BI. FUNCTIONAL DYSPEPSIA**

Diagnostic criteria\* Must include:

- 1. One or more of the following:
  - a. Bothersome postprandial fullness
  - b. Early satiation
  - c. Epigastric pain
  - d. Epigastric burning

#### AND

- 2. No evidence of structural disease (including at upper endoscopy) that is likely to explain the symptoms
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# **Bla. Postprandial Distress Syndrome**

Diagnostic criteria\* Must include **one or both** of the following:

- Bothersome postprandial fullness, occurring after ordinary-sized meals, at least several times per week
- 2. Early satiation that prevents finishing a regular meal, at least several times per week
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# Supportive criteria

- 1. Upper abdominal bloating or postprandial nausea or excessive belching can be present
- 2. Epigastric pain syndrome may coexist

#### **Blb.** Epigastric Pain Syndrome

Diagnostic criteria\* Must include **all** of the following:

- 1. Pain or burning localized to the epigastrium of at least moderate severity, at least once per week
- 2. The pain is intermittent
- 3. Not generalized or localized to other abdominal or chest regions
- 4. Not relieved by defecation or passage of flatus
- 5. Not fulfilling criteria for gallbladder and sphincter of Oddi disorders
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

### Supportive criteria

- 1. The pain may be of a burning quality, but without a retrosternal component
- 2. The pain is commonly induced or relieved by ingestion of a meal, but may occur while fasting
- 3. Postprandial distress syndrome may coexist

### **B2. BELCHING DISORDERS**

# B2a. Aerophagia

Diagnostic criteria\* Must include **all** of the following:

- 1. Troublesome repetitive belching at least several times a week
- 2. Air swallowing that is objectively observed or measured
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# **B2b.** Unspecified Excessive Belching

Diagnostic criteria\* Must include **all** of the following:

- 1. Troublesome repetitive belching at least several times a week
- 2. No evidence that excessive air swallowing underlies the symptom
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

#### **B3. NAUSEA AND VOMITING DISORDERS**

# B3a. Chronic Idiopathic Nausea

Diagnostic criteria\* Must include **all** of the following:

- 1. Bothersome nausea occurring at least several times per week
- 2. Not usually associated with vomiting
- Absence of abnormalities at upper endoscopy or metabolic disease that explains the nausea
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

#### **B3b.** Functional Vomiting

- 1. On average one or more episodes of vomiting per week
- Absence of criteria for an eating disorder, rumination, or major psychiatric disease according to DSM-IV
- Absence of self-induced vomiting and chronic cannabinoid use and absence of abnormalities in the central nervous system or metabolic diseases to explain the recurrent vomiting
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# **B3c.** Cyclic Vomiting Syndrome

Diagnostic criteria Must include **all** of the following:

- Stereotypical episodes of vomiting regarding onset (acute) and duration (less than one week)
- 2. Three or more discrete episodes in the prior year
- 3. Absence of nausea and vomiting between episodes

# Supportive criterion

History or family history of migraine headaches

## **B4. Rumination Syndrome in Adults**

Diagnostic criteria Must include **both** of the following:

- 1. Persistent or recurrent regurgitation of recently ingested food into the mouth with subsequent spitting or remastication and swallowing
- 2. Regurgitation is not preceded by retching

#### Supportive criteria

- 1. Regurgitation events are usually not preceded by nausea
- 2. Cessation of the process when the regurgitated material becomes acidic
- 3. Regurgitant contains recognizable food with a pleasant taste

# C. Functional Bowel Disorders

# CI. Irritable Bowel Syndrome

Diagnostic criterion\*

Recurrent abdominal pain or discomfort\*\* at least 3 days/month in the last 3 months associated with *two or more* of the following:

- 1. Improvement with defecation
- 2. Onset associated with a change in frequency of stool
- 3. Onset associated with a change in form (appearance) of stool
- \* Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis
- \*\* "Discomfort" means an uncomfortable sensation not described as pain.

In pathophysiology research and clinical trials, a pain/discomfort frequency of at least 2 days a week during screening evaluation is recommended for subject eligibility.

#### C2. Functional Bloating

- 1. Recurrent feeling of bloating or visible distension at least 3 days/month in the last 3 months
- 2. Insufficient criteria for a diagnosis of functional dyspepsia, irritable bowel syndrome, or other functional GI disorder
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# **C3. Functional Constipation**

Diagnostic criteria\*

- 1. Must include *two or more* of the following:
  - a. Straining during at least 25% of defecations
  - b. Lumpy or hard stools in at least 25% of defecations
  - c. Sensation of incomplete evacuation for at least 25% of defecations
  - d. Sensation of anorectal obstruction/blockage for at least 25% of defecations
  - e. Manual maneuvers to facilitate at least 25% of defecations (e.g., digital evacuation, support of the pelvic floor)
  - f. Fewer than three defecations per week
- 2. Loose stools are rarely present without the use of laxatives
- Insufficient criteria for irritable bowel syndrome
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

#### C4. Functional Diarrhea

Diagnostic criterion\*

Loose (mushy) or watery stools without pain occurring in at least 75% of stools

\* Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# C5. Unspecified Functional Bowel Disorder

Diagnostic criterion\*

Bowel symptoms not attributable to an organic etiology that do not meet criteria for the previously defined categories

\* Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# D. Functional Abdominal Pain Syndrome

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- 1. Continuous or nearly continuous abdominal pain
- 2. No or only occasional relationship of pain with physiological events (e.g., eating, defecation, or menses)
- 3. Some loss of daily functioning
- 4. The pain is not feigned (e.g., malingering)
- 5. Insufficient symptoms to meet criteria for another functional gastrointestinal disorder that would explain the pain
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

# E. Functional Gallbladder and Sphincter of Oddi Disorders

# E. Functional Gallbladder and Sphincter of Oddi Disorders

Diagnostic criteria Must include episodes of pain located in the epigastrium and/or right upper quadrant and **all** of the following:

- 1. Episodes lasting 30 minutes or longer
- 2. Recurrent symptoms occurring at different intervals (not daily)
- 3. The pain builds up to a steady level
- 4. The pain is moderate to severe enough to interrupt the patient's daily activities or lead to an emergency department visit
- 5. The pain is not relieved by bowel movements
- 6. The pain is not relieved by postural change
- 7. The pain is not relieved by antacids
- 8. Exclusion of other structural disease that would explain the symptoms

## Supportive criteria

The pain may present with one or more of the following:

- 1. Associated with nausea and vomiting
- 2. Radiates to the back and/or right infra subscapular region
- 3. Awakens from sleep in the middle of the night

#### EI. Functional Gallbladder Disorder

Diagnostic criteria Must include **all** of the following:

- 1. Criteria for functional gallbladder and sphincter of Oddi disorder
- 2. Gallbladder is present
- 3. Normal liver enzymes, conjugated bilirubin, and amylase/lipase

### E2. Functional Biliary Sphincter of Oddi Disorder

Diagnostic criteria Must include **both** of the following:

- 1. Criteria for functional gallbladder and sphincter of Oddi disorder
- 2. Normal amylase/lipase

# Supportive criterion

Elevated serum transaminases, alkaline phosphatase, or conjugated bilirubin temporarily related to at least two pain episodes

# E3. Functional Pancreatic Sphincter of Oddi Disorder

- 1. Criteria for functional gallbladder and sphincter of Oddi disorder and
- 2. Elevated amylase/lipase

## F. Functional Anorectal Disorders

#### FI. Functional Fecal Incontinence

Diagnostic criteria\*

- 1. Recurrent uncontrolled passage of fecal material in an individual with a developmental age of at least 4 years and one or more of the following:
  - a. Abnormal functioning of normally innervated and structurally intact muscles
  - b. Minor abnormalities of sphincter structure and/or innervation
  - c. Normal or disordered bowel habits, (i.e., fecal retention or diarrhea)
  - d. Psychological causes

#### AND

- 2. Exclusion of *all* the following:
  - a. Abnormal innervation caused by lesion(s) within the brain (e.g., dementia), spinal cord, or sacral nerve roots, or mixed lesions (e.g., multiple sclerosis), or as part of a generalized peripheral or autonomic neuropathy (e.g., due to diabetes)
  - b. Anal sphincter abnormalities associated with a multisystem disease (e.g., scleroderma)
  - c. Structural or neurogenic abnormalities believed to be the major or primary cause of fecal incontinence

# F2. FUNCTIONAL ANORECTAL PAIN

### F2a. Chronic Proctalgia

Diagnostic criteria\* Must include **all** of the following:

- 1. Chronic or recurrent rectal pain or aching
- 2. Episodes last 20 minutes or longer
- 3. Exclusion of other causes of rectal pain such as ischemia, inflammatory bowel disease, cryptitis, intramuscular abscess, anal fissure, hemorrhoids, prostatitis, and coccygodynia
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

Chronic proctalgia may be further characterized into levator ani syndrome or unspecified anorectal pain based on digital rectal examination.

# F2a.I. Levator Ani Syndrome

Diagnostic criterion

Symptom criteria for chronic proctalgia and tenderness during posterior traction on the puborectalis

<sup>\*</sup> Criteria fulfilled for the last 3 months

# F2a.2. Unspecified Functional Anorectal Pain

Diagnostic criterion

Symptom criteria for chronic proctalgia but no tenderness during posterior traction on the puborectalis

# F2b. Proctalgia Fugax

Diagnostic criteria Must include **all** of the following:

- 1. Recurrent episodes of pain localized to the anus or lower rectum
- 2. Episodes last from seconds to minutes
- 3. There is no anorectal pain between episodes

For research purposes criteria must be fulfilled for 3 months; however, clinical diagnosis and evaluation may be made prior to 3 months.

#### F3. Functional Defecation Disorders

Diagnostic criteria\*

- 1. The patient must satisfy diagnostic criteria for functional constipation\*\*
- 2. During repeated attempts to defecate must have at least two of the following:
  - Evidence of impaired evacuation, based on balloon expulsion test or imaging
  - b. Inappropriate contraction of the pelvic floor muscles (i.e., anal sphincter or puborectalis) or less than 20% relaxation of basal resting sphincter pressure by manometry, imaging, or EMG
  - c. Inadequate propulsive forces assessed by manometry or imaging
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

#### \*\* Diagnostic criteria for functional constipation:

- (1) Must include *two or more* of the following: (a) Straining during at least 25% of defecations, (b) Lumpy or hard stools in at least 25% of defecations, (c) Sensation of incomplete evacuation for at least 25% of defecations, (d) Sensation of anorectal obstruction/blockage for at least 25% of defecations, (e) Manual maneuvers to facilitate at least 25% of defecations (e.g., digital evacuation, support of the pelvic floor), (f) Fewer than three defecations per week.
- (2) Loose stools are rarely present without the use of laxatives.
- (3) Insufficient criteria for irritable bowel syndrome.

### F3a. Dyssynergic Defecation

Diagnostic criterion

Inappropriate contraction of the pelvic floor or less than 20% relaxation of basal resting sphincter pressure with adequate propulsive forces during attempted defecation

# F3b. Inadequate Defecatory Propulsion

Diagnostic criterion

Inadequate propulsive forces with or without inappropriate contraction or less than 20% relaxation of the anal sphincter during attempted defecation

# G. Childhood Functional GI Disorders: Infant/Toddler

# GI. Infant Regurgitation

Diagnostic criteria Must include **both** of the following in otherwise healthy infants 3 weeks to 12 months of age:

- 1. Regurgitation two or more times per day for 3 or more weeks
- 2. No retching, hematemesis, aspiration, apnea, failure to thrive, feeding or swallowing difficulties, or abnormal posturing

# **G2. Infant Rumination Syndrome**

Diagnostic criteria Must include **all** of the following for at least 3 months:

- 1. Repetitive contractions of the abdominal muscles, diaphragm, and tongue
- 2. Regurgitation of gastric content into the mouth, which is either expectorated or rechewed and reswallowed
- 3. Three or more of the following:
  - a. Onset between 3 and 8 months
  - b. Does not respond to management for gastroesophageal reflux disease, or to anticholinergic drugs, hand restraints, formula changes, and gavage or gastrostomy feedings
  - c. Unaccompanied by signs of nausea or distress
  - d. Does not occur during sleep and when the infant is interacting with individuals in the environment

# G3. Cyclic Vomiting Syndrome

Diagnostic criteria Must include **both** of the following:

- 1. Two or more periods of intense nausea and unremitting vomiting or retching lasting hours to days
- 2. Return to usual state of health lasting weeks to months

#### **G4. Infant Colic**

Diagnostic criteria Must include all of the following in infants from birth to 4 months of age:

- 1. Paroxysms of irritability, fussing or crying that starts and stops without obvious cause
- 2. Episodes lasting 3 or more hours/day and occurring at least 3 days/wk for at least 1 week
- 3. No failure to thrive

### G5. Functional Diarrhea

- 1. Daily painless, recurrent passage of three or more large, unformed stools
- 2. Symptoms that last more than 4 weeks
- 3. Onset of symptoms that begins between 6 and 36 months of age
- 4. Passage of stools that occurs during waking hours
- 5. There is no failure-to-thrive if caloric intake is adequate

## G6. Infant Dyschezia

Diagnostic criteria Must include **both** of the following in an infant less than 6 months of age

- 1. At least 10 minutes of straining and crying before successful passage of soft stools
- 2. No other health problems

# **G7. Functional Constipation**

Diagnostic criteria Must include one month of **at least two** of the following in infants up to 4 years of age:

- 1. Two or fewer defecations per week
- 2. At least one episode/week of incontinence after the acquisition of toileting skills
- 3. History of excessive stool retention
- 4. History of painful or hard bowel movements
- 5. Presence of a large fecal mass in the rectum
- 6. History of large diameter stools which may obstruct the toilet

Accompanying symptoms may include irritability, decreased appetite, and/or early satiety. The accompanying symptoms disappear immediately following passage of a large stool.

#### H. Childhood Functional GI Disorders: Child/Adolescent

#### HI. VOMITING AND AEROPHAGIA

### HIa. Adolescent Rumination Syndrome

Diagnostic criteria\* Must include **all** of the following:

- 1. Repeated painless regurgitation and rechewing or expulsion of food that
  - a. begin soon after ingestion of a meal
  - b. do not occur during sleep
  - c. do not respond to standard treatment for gastroesophageal reflux
- 2. No retching
- 3. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process that explains the subject's symptoms
- \* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

### **HIb. Cyclic Vomiting Syndrome**

Diagnostic criteria Must include **both** of the following:

- 1. Two or more periods of intense nausea and unremitting vomiting or retching lasting hours to days
- 2. Return to usual state of health lasting weeks to months

### HIc. Aerophagia

- 1. Air swallowing
- 2. Abdominal distention due to intraluminal air
- 3. Repetitive belching and/or increased flatus
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis

#### H2. ABDOMINAL PAIN-RELATED FUNCTIONAL GI DISORDERS

# H2a. Functional Dyspepsia

Diagnostic criteria\* Must include **all** of the following:

- 1. Persistent or recurrent pain or discomfort centered in the upper abdomen (above the umbilicus)
- 2. Not relieved by defecation or associated with the onset of a change in stool frequency or stool form (i.e., not irritable bowel syndrome)
- 3. No evidence of an inflammatory, anatomic, metabolic or neoplastic process that explains the subject's symptoms
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis

# H2b. Irritable Bowel Syndrome

Diagnostic criteria\* Must include **both** of the following:

- 1. Abdominal discomfort\*\* or pain associated with two or more of the following at least 25% of the time:
  - a. Improvement with defecation
  - b. Onset associated with a change in frequency of stool
  - c. Onset associated with a change in form (appearance) of stool
- 2. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process that explains the subject's symptoms
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis
- \*\* "Discomfort" means an uncomfortable sensation not described as pain.

### H2c. Abdominal Migraine

- 1. Paroxysmal episodes of intense, acute periumbilical pain that lasts for 1 hour or more
- 2. Intervening periods of usual health lasting weeks to months
- 3. The pain interferes with normal activities
- 4. The pain is associated with 2 of the following:
  - a. Anorexia
  - b. Nausea
  - c. Vomiting
  - d. Headache
  - e. Photophobia
  - f. Pallor
- 5. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process considered that explains the subject's symptoms
- \* Criteria fulfilled two or more times in the preceding 12 months

#### H2d. Childhood Functional Abdominal Pain

Diagnostic criteria\* Must include **all** of the following:

- 1. Episodic or continuous abdominal pain
- 2. Insufficient criteria for other FGIDs
- 3. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process that explains the subject's symptoms
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis

# H2d1. Childhood Functional Abdominal Pain Syndrome

Diagnostic criteria\* Must satisfy criteria for childhood functional abdominal pain and have at least 25% of the time **one or more** of the following:

- 1. Some loss of daily functioning
- 2. Additional somatic symptoms such as headache, limb pain, or difficulty sleeping
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis

#### H3. CONSTIPATION AND INCONTINENCE

# **H3a.** Functional Constipation

Diagnostic criteria\* Must include **two or more** of the following in a child with a developmental age of at least 4 years with insufficient criteria for diagnosis of IBS:

- 1. Two or fewer defecations in the toilet per week
- 2. At least one episode of fecal incontinence per week
- 3. History of retentive posturing or excessive volitional stool retention
- 4. History of painful or hard bowel movements
- 5. Presence of a large fecal mass in the rectum
- 6. History of large diameter stools which may obstruct the toilet
- \* Criteria fulfilled at least once per week for at least 2 months prior to diagnosis

### **H3b.** Nonretentive Fecal Incontinence

Diagnostic criteria\* Must include **all** of the following in a child with a developmental age at least 4 years:

- Defecation into places inappropriate to the social context at least once per month
- 2. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process that explains the subject's symptoms
- 3. No evidence of fecal retention
- \* Criteria fulfilled for at least 2 months prior to diagnosis