Gastroduodenal Disorders

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Symptoms that can be attributed to the gastroduodenal region represent one of the main subgroups among functional gastrointestinal disorders. A slightly modified classification into the following 4 categories is proposed: (1) functional dyspepsia, characterized by 1 or more of the following: postprandial fullness, early satiation, epigastric pain, and epigastric burning, which are unexplained after a routine clinical evaluation; and includes 2 subcategories: postprandial distress syndrome that is characterized by meal-induced dyspeptic symptoms and epigastric pain syndrome that does not occur exclusively postprandially; the 2 subgroups can overlap; (2) belching disorders, defined as audible escapes of air from the esophagus or the stomach, are classified into 2 subcategories, depending on the origin of the refluxed gas as detected by intraluminal impedance measurement belching: gastric and supragastric belch; (3) nausea and vomiting disorders, which include 3 subcategories: chronic nausea and vomiting syndrome; cyclic vomiting syndrome; and cannabinoid hyperemesis syndrome; and (4) rumination syndrome.

Keywords: Dyspepsia; Nausea; Vomiting; Belching; Rumination.

At least 20% of the population has chronic symptoms that can be attributed to disorders of gastroduodenal function, and the majority of these people have no evidence of organic causes.[1] Functional gastroduodenal disorders are classified into 4 categories: functional dyspepsia (FD) (comprising postprandial distress syndrome [PDS] and epigastric pain syndrome [EPS]), belching disorders (comprising excessive gastric and supragastric belching), chronic nausea and vomiting disorders (comprising chronic nausea vomiting syndrome [CNVS], cyclic vomiting syndrome [CVS], and cannabinoid hyperemesis syndrome [CHS]), and rumination syndrome.

B1: Functional Dyspepsia

Definition

FD is a medical condition that significantly impacts on the usual activities of a patient and is characterized by one or more of the following symptoms: postprandial fullness, early satiation, epigastric pain, and epigastric burning that are unexplained after a routine clinical evaluation.[1]

Symptom definitions remain somewhat vague, and potentially difficult to interpret by patients, practicing physicians and investigators alike, as documented by the major misunderstandings that characterize many of the therapeutic trials on FD that claim to have been carried out according to the Rome criteria, although better inclusion criteria were obtained when the Rome III definition was adopted.[2] In order to overcome at least some of these problems, the committee proposed more detailed descriptive definitions of symptoms that should be enriched by pictograms.[3]

The broad term *functional dyspepsia* comprises patients from the diagnostic categories of PDS, which is characterized by meal-induced dyspeptic symptoms; EPS, which refers to epigastric pain or epigastric burning that does not occur exclusively postprandially, can occur during fasting, and can be even improved by meal ingestion, and overlapping PDS and EPS, which is characterized by meal-induced dyspeptic symptoms and epigastric pain or burning.

Uninvestigated vs Investigated Dyspepsia

From an etiological viewpoint, patients with dyspeptic symptoms can be subdivided into 2 main categories as follows:

1. Those with an organic, systemic, or metabolic cause for the symptoms that can be identified by traditional diagnostic procedures where, if the disease improves or is eliminated, symptoms also improve or resolve (eg, peptic ulcer disease, malignancy, pancreaticobiliary disease, endocrine disorders, or medication use) and is described by the term *secondary dyspepsia*. *Helicobacter pylori*–associated

Abbreviations used in this paper: **CHS, cannabinoid hyperemesis syndrome; CNVS, chronic nausea and vomiting syndrome; CVS, cyclic vomiting syndrome; EPS, epigastric pain syndrome; FD, functional dyspepsia; GERD, gastroesophageal reflux disease; IBS, irritable bowel syndrome; LES, lower esophageal sphincter; PDS, postprandial distress syndrome; UES, upper esophageal sphincter.**

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dyspepsia is diagnosed in a subset of dyspepsia patients whose symptoms are treated by *H pylori* eradication.

2. Those in whom no identifiable explanation for the symptoms can be identified by traditional diagnostic procedures that are exemplified under the "umbrella" term *functional dyspepsia*.

Epidemiology

Large-scale studies reported a 10%−30% prevalence of FD worldwide.[4] The reported prevalence of dyspepsia varies considerably in different populations, due to different interpretation and expression of symptoms, diagnostic criteria adopted, environmental factors, and local prevalence of organic diseases, such as peptic ulcer and gastric cancer. Patients with dyspepsia have reduced quality of life and emotional distress because of their symptoms, with heavy economic burdens through direct medical expenses and loss of productivity. Different studies have identified different risk factors for dyspepsia, including female sex, increasing age, high socioeconomic status, decreased degree of urbanization, *H pylori* infection, nonsteroidal anti-inflammatory drug use, low educational level, renting accommodation, absence of central heating, sharing a bed with siblings, and being married. Interestingly, smoking is only marginally associated with dyspepsia, and alcohol and coffee are not.[4,5]

Gastroduodenal Disorders

B1. Functional Dyspepsia

Diagnostic criteria

1. One or more of the following:
   a. Bothersome postprandial fullness
   b. Bothersome early satiation
   c. Bothersome epigastric pain
   d. Bothersome epigastric burning

AND

2. No evidence of structural disease (including at upper endoscopy) that is likely to explain the symptoms

[a]Must fulfill criteria for B1a. PDS and/or B1b. EPS.

[b]Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.

B1a. Postprandial Distress Syndrome

Diagnostic criteria

Must include one or both of the following at least 3 days per week:

1. Bothersome postprandial fullness (ie, severe enough to impact on usual activities)
2. Bothersome early satiation (ie, severe enough to prevent finishing a regular-size meal)

No evidence of organic, systemic, or metabolic disease that is likely to explain the symptoms on routine investigations (including at upper endoscopy)

[a]Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.

Supportive remarks

- Postprandial epigastric pain or burning, epigastric bloating, excessive belching, and nausea can also be present
- Vomiting warrants consideration of another disorder
- Heartburn is not a dyspeptic symptom but may often coexist
- Symptoms that are relieved by evacuation of feces or gas should generally not be considered as part of dyspepsia

Other individual digestive symptoms or groups of symptoms, eg, from gastroesophageal reflux disease and the irritable bowel syndrome may coexist with PDS

B1b. Epigastric Pain Syndrome

Diagnostic criteria[a]

Must include at least 1 of the following symptoms at least 1 day a week:

1. Bothersome epigastric pain (ie, severe enough to impact on usual activities)

AND/OR

2. Bothersome epigastric burning (ie, severe enough to impact on usual activities)

No evidence of organic, systemic, or metabolic disease that is likely to explain the symptoms on routine investigations (including at upper endoscopy).

[a]Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis

Supportive remarks

1. Pain may be induced by ingestion of a meal, relieved by ingestion of a meal, or may occur while fasting
2. Postprandial epigastric bloating, belching, and nausea can also be present
3. Persistent vomiting likely suggests another disorder