Clinical Features of Functional Dyspepsia

BD Goswami*, Chiranjita Phukan**

Functional gastrointestinal disorders (FGID) comprises of symptoms which arise mostly in the mid or lower gastrointestinal tract that are not attributed to anatomic or biochemical defects. They are prevalent throughout the world and often encountered by clinicians in their day to day clinical practice. The three common Functional gastrointestinal disorders (FGID) are Irritable Bowel Syndrome (IBS) Functional Constipation and Functional Dyspepsia (FD).

Functional dyspepsia is an extremely common disorder in an otherwise healthy population. On the basis of different epidemiological studies, the prevalence of dyspepsia ranges from 5% to 25%. Amongst individuals who experience dyspeptic symptoms, approximately 25% seek treatment making the condition responsible for 4% to 5% of all primary care physician visits. Thus FD has gained acceptance as a major healthcare concern which warrants a great deal of in-depth research particularly on the management aspect.

Dyspepsia is often broadly defined as pain or discomfort centered in the upper abdomen. It may include multiple and varying symptoms such as epigastric pain, postprandial fullness, early satiation (also called early satiety) anorexia, belching, nausea and vomiting, upper abdominal bloating and even heartburn and regurgitation. Symptoms of dyspepsia though chronic are mostly intermittent even in the most symptomatic episodes. Dyspepsia is usually polymotumatic, with 99% of patients reporting more than 2 symptoms, over 80% reporting more than 5 symptoms, and less than 0.1% reporting 1 symptom.

The definition of functional dyspepsia has evolved over the years leading to several consensus definitions till date. However the most recent consensus committee Rome III has defined functional dyspepsia as the presence of symptoms considered by the physician to originate from the gastro duodenal region in the absence of organic, systemic or metabolic disease that is likely to explain the symptoms. The diagnostic criteria for functional dyspepsia are the occurrence of one or more of the following symptoms at least for three months with onset at least six months previously – bothersome post prandial fullness, early satiation, epigastric pain and epigastric burning.

Postprandial fullness is an unpleasant sensation perceived as the prolonged persistence of food in the stomach. Early satiation is a feeling that the stomach is overfilled soon after starting to eat, out of proportion to the size of the meal being eaten and such that the meal cannot be finished. Epigastric refers to the region between the umbilicus and the lower end of the stomach within the midclavicular line and Epigastric Pain refers to a subjective unpleasant sensation. Epigastric burning is referred to as an unpleasant subjective sensation of heat.

The Rome III consensus committee has proposed that Functional dyspepsia should be subdivided into two groups on the distinction of meal related and meal unrelated symptoms –

1. Post prandial distress syndrome- It is meal related dyspeptic symptoms characterized by post prandial fullness and early satiety.

2. Epigastric pain syndrome- It is meal unrelated dyspeptic symptoms characterized by Epigastric pain and burning.

In a retrospective analysis of symptoms and pathophysiological abnormalities Kindl and his colleagues reported that epigastric pain syndrome was in 53% of dyspeptic patients and post prandial distress syndrome was in 84% of patients with an overlap in 47%. Impaired accommodation was more prevalent among patients with post prandial distress syndrome (38%) than among patients with both epigastric pain syndrome or post prandial distress syndrome.

Clinical Approach to Functional Dyspepsia

While evaluating a patient with uninvestigated dyspepsia proper attention should be given to the history and physical examination. The nature of symptoms, their duration and frequency particularly with regard to their relationship to the duration of meals, the possible influence of dietary habits should be ascertained.

Onset of symptoms can also occur after an attack of enteritis. In a prospective cohort study, development of Functional dyspepsia was increased five fold in patients one year after acute salmonella gastroenteritis compared to subjects who did not have gastroenteritis. In a cohort study of 2597 subjects eligible, (64.9%) had reported acute gastroenteritis. Multivariate odd ratios for dyspepsia at 8 years in exposed individuals using a broad definition and the Rome II definition were 2.09 (95% confidence interval: 1.58–2.78) and 2.30 (95% confidence interval: 1.63–3.26), respectively. Prevalence of dyspepsia was higher in females; smokers; those with premorbid irritable bowel syndrome, anxiety, or depression; and those reporting 27 days of diarrhea or abdominal cramps during the acute illness.

Use of medication like NSAIDS and COX2 inhibitors has been linked to dyspeptic symptoms of functional dyspepsia. Dietary habits linked to meals with high fat content, spicy food containing capsaicin and other irritants coffee, alcohol and smoking can cause and aggravate functional dyspepsia.

Patients with functional dyspepsia also suffer from psychiatric co-morbidities, anxiety disorders, depressive disorders, somatoform disorders and a recent or remote history of physical or sexual abuse. Geeraerts and colleagues studied 162 patients with functional dyspepsia who completed a validated questionnaire on abuse in addition to gastric barostat studies; an association was reported between slow solid emptying and a history of childhood abuse and also between psychological abuse in adulthood and gastric hypersensitivity.

The American Gastroenterological Association recommends for a careful history to be taken to exclude alternative conditions (GERD, GB diseases, IBS etc) and to identify alarm features. In younger patients without the presence of these alarm signs, the Consensus guidelines recommend avoiding UGI endoscopy and advocates presenting empiric therapy. In a meta analysis of 14 cohort studies that assessed alarm features and the results of
endoscopy in a total of 17792 patients, only 1.4% had malignancy. The sensitivity of alarm features ranged widely (0-100%) and specificity was ranging from 21%-98%. Thus alarm features have found to have a poor predictive value in identifying upper GI malignancy as based on the meta-analysis.

Weight loss if present is considered to be a symptom for alarm, it being a harbinger towards serious organic diseases. However patients with functional dyspepsia may also present unexplained weight loss which has been documented in population based studies. GERD and peptic ulcer causes symptoms which mimic functional dyspepsia. Burning pain in the epigastrum is a cardinal symptom of dyspepsia and should not be considered to be heart burn unless the pain radiates retrosternally. A word picture questionnaire may help the patient recognize the typical symptom pattern. Presence of typical reflux symptom requires management as a patient of GERD. However if patient’s symptoms do not respond overlap with functional dyspepsia may be considered. In a systematic review evaluating 11366 patients the overall pooled diagnostic odds ratio (DOR) of identifying functional from organic dyspepsia was only 3.99. (with 10 greater being a clinically relevant number) The investigators concluded that a clinical history remained inadequate for distinguishing an organic from a functional cause of dyspepsia.

Because many patients have overlapping symptoms of IBS and dyspepsia, maintaining two separate diagnoses leads to separate, but often parallel, processes of evaluation and treatment. Unfortunately, this results in redundant laboratory tests, duplication of diagnostic studies, frequent office visits, and the use of multiple medications. Dyspeptic symptoms in a patient with systemic diseases like Diabetes Mellitus, cardiac diseases, thyroid disorders and of the patients family and personal history needs to be evaluated for specific organic diseases. Presence of physical findings such as an abdominal mass or organomegaly, ascitis or fecal occult blood is a requisite for further evaluation.

Functional dyspepsia is also associated with reduced quality of life. This is most likely because of the symptom severity rather than by another factor such as co morbid anxiety or depression or delayed gastric emptying. In a study evaluating 864 patients fulfilling Rome III criteria for functional dyspepsia symptom severity score over a two year period was independently associated with decreased quality of life scores and this was significant after considering gastric emptying as well as age, sex and body mass index. Kindt and colleagues evaluated 164 patients with functional dyspepsia, and evaluated quality-of-life parameters as measured by the validated PAGI-QOL (Patient Assessment of Upper Gastrointestinal Quality of Life) questionnaire. Both postprandial fullness and satiety, as well as nausea and vomiting, appeared to be the major symptom determinants of impaired quality of life in this cohort with functional dyspepsia. However, since no control group was assessed, these results must be viewed as preliminary. It is evident from these studies that quality-of-life impairment is not only real, but is also symptom driven. It is hence presumed relief of symptoms would improve quality of life.

The role of Helicobacter pylori infection in the pathogenesis of functional dyspepsia is debated. Though the role of Helicobacter Pylori has often been implemented in the cause of functional dyspepsia over the past decade, is has now been established from various studies that this organism can also inhabit the gastric mucosa without any ulceration. A Meta-Analysis of ten randomized, Controlled Trials provides little support for the use of H. pylori eradication therapy in patients with non ulcer dyspepsia

Though managing patients with Functional Dyspepsia can be a challenging and frustrating process for clinicians, but the huge economic burden incurred indirectly from this condition makes it imperative for the clinician to work towards a common goal to diagnose and manage these conditions.

References