FUNCTIONAL DYSPEPSIA - AN UPDATED REVIEW

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ABSTRACT

Functional dyspepsia (FD) refers to upper abdominal symptoms like upper abdominal or retrosternal pain or discomfort, heart burn, nausea, etc. The symptoms are common, but often poorly understood and mistaken for conditions like chronic gastritis and peptic ulcer disease. Worldwide, the prevalence of dyspepsia is about 20-30% [1]. In the department of internal medicine at the Ruhengeri hospital, there have been 16.4% outpatient cases and 16.1% cases of admissions (Jan-June-2014). A high number of cases would be in other hospitals as well. The causes postulated are the increased production of acid, visceral hypersensitivity, H. pylori infection, emotional stress, reduced immunity, etc. The diagnosis is based on exclusion of organic causes for similar symptoms.
The treatment is mainly with lifestyle modifications, and the pharmacological therapy consists of antacids, antiflatulents, prokinetic drugs, cytoprotective drugs, and proton pump inhibitors. It can be recommended that greater awareness needs to be generated among physicians regarding FD. They in turn can counsel patients and lay stress on lifestyle and preventive factors to improve this described condition

Keywords: Dyspepsia - Epigastric pain - Gastritis.

RESUME

La Dyspepsie fonctionnelle (DF) se réfère à des symptômes abdominaux supérieurs comme des douleurs abdominales ou rétrosternales supérieures ou inconfort, brûlures, nausées, etc... Les symptômes sont communs, mais souvent mal compris et confondus avec les conditions telles que la gastrite chronique et l'ulcère gastroduodénale. Dans le monde entier, la prévalence de la dyspepsie est environ 20-30 % [1]. Dans le département de médecine interne de l'hôpital de Ruhengeri, il y a eu 16,4 % de cas en ambulatoire et 16,1 % de cas en hospitalisation (Jan-juin 2014). Un grand nombre de cas serait aussi bien dans d'autres hôpitaux. Les hypothèses en Causes sont : une production accrue d'acide, une hypersensibilité viscérale, une infection H. pylori, un stress émotionnel, une immunité réduite, etc... Le diagnostic repose sur l'exclusion des causes organiques pour des symptômes similaires. Le traitement est principalement la modification du style de vie, et le traitement pharmacologique est constitué d'antiacides, antiflatulents, médicaments prokinétiques, cytoprotecteurs, et les inhibiteurs de la pompe à protons.
Il peut être recommandé une plus grande prise de conscience de la part des médecins concernant DF, qui peuvent à leur tour conseiller les patients et mettre l'accent sur le style de vie et les facteurs de prévention pour améliorer cette condition.

Mots-clés : Dyspepsie - Douleur épigastrique - Gastrite

INTRODUCTION

Functional dyspepsia (FD) refers to upper abdominal symptoms like upper abdominal or retrosternal pain or discomfort, heart burn, nausea, etc. Symptoms usually referable to upper gastrointestinal tract following intake of food. The term dyspepsia originates from Greek language."Duis", meaning difficult and "peptin" means to digest. The symptoms are common, but often poorly understood and mistaken for conditions like chronic gastritis and peptic ulcer disease. Many patients visit hospital for dyspeptic symptoms. Though a functional problem with no serious consequences, it becomes a cause of sickness, distress and abstinence from work, world over. Therefore it is necessary to take it as seriously as any other sickness.
Functional gastrointestinal disorders including FD, have become generally more widely accepted as legitimate diagnostic conditions worthy of clinical attention and scientific investigation [1]. In this context, presented here is an overall view of FD.

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Worldwide the prevalence of dyspepsia is about 20-30% [1]. It is most common cause for upper gastrointestinal symptoms, and varies depending on different factors like food habits, obesity, alcohol, tobacco coffee intake and spices in diet.

In internal medicine department, Ruhengeri Hospital, there have been 16.4% outpatient cases and 16.1% cases in hospitalization (Jan-June-2014). A high number of cases would be in other hospitals as well.

According to Rome iii criteria [2], a recent consensus has defined dyspepsia as presence of symptoms considered by the physician to originate from the gastro duodenal region and only 4 symptoms, (1) bothersome postprandial fullness, (2) early satiation, (3) epigastric pain and (4) epigastric burning, are now considered to be specific for a gastroduodenal origin. Patients having chronic dyspeptic symptoms for the past 3 months with onset at least 6 months before diagnosis in absence of structural abnormality on upper G.I. endoscopy and metabolic or systemic causes explaining the symptoms are classified as FD [4].

Classification

Functional dyspepsia is divided into 2 broad groups
1) Predominant epigastric pain syndrome and
2) Meal related early satiety post prandial distress syndrome.

CAUSES

Multiple factors have been implicated in causing functional dyspepsia, which are as follows-

- Gastric hyperacidity with symptomatic relief obtained by antacid drugs, it was postulated that increased acid production may be involved in dyspepsia. But normal acid production has been demonstrated in individuals with FD [5] hence it may not be the cause in all cases. Possibly, hypersensitivity to normal acid production causes the pain.

- Visceral hypersensitivity-Visceral hypersensitivity plays an important role in functional dyspepsia. Kindt et al [6] demonstrated the existence of a relation between symptoms, gastric emptying and gastric hypersensitivity. Patients having hypersensitivity to visceral distension had dyspepsia.

- Helicobacter pylori infection- can cause, inflammation and dysmotility,initiate visceral hypersensitivity and alter acid secretion. Different studies show variable role of H. pylori infection in causing functional dyspepsia. Study by Morain [7] has shown that H. pylori is more frequently found in dyspeptic, than normal subjects. As Francesco et. Al, 68.4% patients with dyspepsia were found to be positive for H. pylori infection [8]. Other studies have failed to show such association [9].

- Gastrointestinal motility- Gastrointestinal motility abnormalities (delayed or accelerated gastric emptying and distension of stomach to accommodate food can cause post prandial pain after a meal or early satiety. These can cause dyspepsia.

- Post infectious- Dyspepsia is known to develop as sequel to infections like salmonella, Giardia.

- Food intolerance- Food intolerance may manifest as dyspepsia. Commonly implicated are beans, lactose containing foods, spices, caffeinated drinks, etc. Food intolerance causing FD is purely subjective and there is no objective data available.

- Emotional factors-The limbic system is responsible for central control of gastrointestinal system and also emotions. Mental and emotional stress also causes dyspepsia. In the DIGEST study, prevalence of upper G.I. symptoms were investigated for 3 months in about 5581 healthy subjects from general population, major risk factors were psychological stressors, particularly recent life events [10].

- Immune system involvement-Some observations indicate continuing post infection inflammation due to diminished immunity to cause symptoms of dyspepsia.

- Genetic factors- In certain individuals there may be a genetic factor manifesting as abnormal perception of visceral pain in FD [11].

DIAGNOSIS

Diagnosis of FD is mainly of exclusion. A detailed history, including intake of drugs and clinical examination would clinically exclude an organic cause.. Upper G.I. endoscopy can exclude chronic gastritis, which is the most common condition mistaken for in dyspepsia. Stool examination, ultrasound, etc. can be planned based on the symptoms.
Differential diagnosis
A large number of organic conditions present with similar symptoms. Notable are peptic ulcer disease, chronic pancreatitis, cholecystitis, chronic mesenteric ischemia,e.t.c. Following conditions can mimic functional dyspepsia, hence need to be excluded [12].

- Functional disorders like Non-ulcer dyspepsia, Gastro-oesophageal reflux disease.
- Peptic ulcer disease.
- Medication related: non-steroidal anti-inflammatory drugs, antibiotics, iron, potassium supplements, digoxin.
- Carbohydrate malabsorption (lactose, fructose, sorbitol).
- Systemic disorders (diabetes, thyroid, parathyroid,
- Intestinal parasites.
- Abdominal malignancy.

MANAGEMENT

-Life style measures- all patients should be given reassurance and advised life style measures. No drug or drugs in combination gives total cure, this has to be explained to the patients. Advice regarding taking meals in time, avoiding heavy meals, excess spices, restricting caffeine and alcohol, relaxation and moderate exercise.
-Pharmacological treatment- Various groups of drugs are used with variable results. These are antacids (prototype aluminium hydroxide), H2 receptor antagonists (Cimetidine), proton pump inhibitors (Omeprazole), cytoprotective drugs (Sucralfate), prokinetic drugs (dopamine, metoclopramide), Anti H-pylori drugs (Clarithromycin), and psychotropic drugs (amitryptiline). Erythromycin, is a motilin receptor agonist with strong gastro-prokinetic properties.It is often used for the management of gastroparesis not responding to first line prokinetics [13]. It can be tried in cases resistant to conventional drugs.
If life style measures fail or symptoms are severe, H2 receptor antagonists or PPI can be used for about 4 weeks. Antiflatulent agents like simethicone can be used for post

prandial symptoms. If symptoms persist, testing for H.pylori or empirical treatment for H-pylori is advisable. These drugs can be used singly or in combination if symptoms are severe or do not respond to a single drug. If symptoms still persist, a trial of low dose tricyclic antidepressants can be given.
Guidelines set by Ministry of Health Rwanda, for treating functional dyspepsia, can be put in use.

Since functional dyspepsia is a condition with entirely subjective symptoms, objective clinical trials are variable and difficult to conduct. Symptoms vary as per the ethnicity, gender, life style factors and perception of disease.

CONCLUSION

FD refers to symptoms referred to upper gastrointestinal system. It is one of the principal causes for people seeking consultation world over. Though a functional disorder, it becomes a cause for sickness and absenteeism from work. Definition of FD has been laid down as per Rome 3 criteria. Causes postulated are increased production of acid, visceral hypersensitivity, H. pylori infection, emotional stress, reduced immunity, etc. Diagnosis is based on exclusion of organic causes for similar symptoms.
Treatment is mainly with lifestyle modification. Pharmacological therapy consists of antacids, anti flatulents, prokinetic drugs, cytoprotective drugs, proton pump inhibitors,
It can be recommended that greater awareness needs to be generated among physicians regarding FD. They in turn can counsel patients and lay stress on life style and preventive factors to improve the condition

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