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# A New Approach to the Management of Uninvestigated Dyspepsia in Primary Care

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## ABSTRACT

**Introduction:** The prevalence of dyspepsia in the general population worldwide is very high (20-40%). Upper abdominal complaints are one of the most common cause of patients' visits to primary care settings. Making an accurate etiological diagnosis of dyspepsia is difficult, but is an important challenge and goal for every doctor in primary care practice. Clinical guidelines have standards for gastroesophageal reflux disease, management of Helicobacter infection and indications for the use of endoscopy (empiric treatment, prompt endoscopy, "test and treat"). In spite of the application of those standards, many patients experience no improvement in their symptoms or often the recurrence of disease. **Aim:** This study presents a new approach to the diagnostic and therapeutic management of uninvestigated dyspepsia in primary care settings to provide long-term effective control of symptoms for family doctors. **Material and methods:** 3000 unselected consecutive dyspeptic patients underwent abdominal ultrasound, and 1000 dyspeptic patients from the same group upper endoscopy. In this approach diagnostic evaluation of dyspepsia includes: abdominal ultrasonography as a first line obligatory routine method and the exact estimation of nutritional condition. **Results:** Abdominal ultrasound, physical examination and BMI control have significant value in the diagnostic evaluation of dyspepsia. The therapeutic approach includes, besides general standards (acid suppressive drugs, eradication of H. pylori, prokinetic and antidepressant agents), life style modification and nutritional interventions as first-line treatments. In this approach the use of new drugs such as ursodeoxycholic acid (UDCA), pre and probiotics, and digestive enzymes supplements is recommended. **Conclusion:** Through the combination of different diagnostic procedures as first line methods, including abdominal ultrasound and nutritional condition (BMI), a family doctor can manage successfully uninvestigated dyspepsia at the primary care level.

**Key words:** uninvestigated dyspepsia, abdominal ultrasound, obesity, BMI, life-style modifications, primary care.

## 1. INTRODUCTION

Clinical guidelines define dyspepsia as chronic or recurrent pain or discomfort centered in the upper abdomen. It is a syndrome of epigastric pain, fullness, discomfort, early satiety, nausea and belching. Patients with predominant or frequent heartburn or acid regurgitation, should be considered to have gastroesophageal reflux disease (GERD) until proven otherwise (1). Dyspepsia is the most common problem in primary care practice. There are two type of dyspepsia: organic dyspepsia and functional dyspepsia (FD). Organic dyspepsia is defined by organic causes such as peptic ulcer, tumors, liver or biliary or pancreatic disorders, food intolerance or other infectious or systemic diseases. FD is more frequent and makes up 50-80% cases of uninvestigated dyspepsia. The diagnostic criteria for FD developed by the Rome Foundation working group (ROME III Criteria) remove esophageal reflux-like symptoms and define epigastric pain syndrome (EPS) and

postprandial distress syndrome (PDS) when there is no organic cause at endoscopy (2).

## 2. AIM

This study presents a new approach to the diagnostic and therapeutic management of uninvestigated dyspepsia in primary care settings, to provide long-term effective control of symptoms for family doctors.

## 3. MATERIAL AND METHODS

In this study 3000 unselected consecutive dyspeptic patients underwent abdominal ultrasound and 1000 dyspeptic patients from the same group upper endoscopy. In this approach diagnostic evaluation of dyspepsia includes: abdominal ultrasonography as a first line obligatory routine method and the exact estimation of nutritional condition.

#### 4. RESULTS

In the course of 3 years (2012, 2013 and 2014) in two primary care settings we performed abdominal ultrasound in 3000 cases of uninvestigated dyspepsia. Pathologic findings are common and the most important for management of dyspepsia is high incidence of fatty liver and biliary diseases (Table 1). We performed 1000 upper endoscopy with standard indication in dyspeptic patients.

Number of patients	Diseases of biliary tract	Fatty liver I degree	Fatty liver II degree	Fatty liver III degree	Chronic hepatitis	The others
3000	384	563	1000	63	30	960
%	12,8 %	18,77 %	33,33 %	2,1 %	1,00 %	32,00 %

**Table 1.** Dyspeptic patients and abdominal ultrasonography findings

Number of patients	Gastric ulcer	Duodenal ulcer	GERD	Chronic gastritis	Gastritis biliaris	Tumors	The others
1000	72	126	253	258	81	33	177
%	7,2 %	12,6 %	25,3 %	25,8 %	8,1 %	3,3 %	17,7 %

**Table 2.** Pathologic endoscopy findings in dyspeptic patients

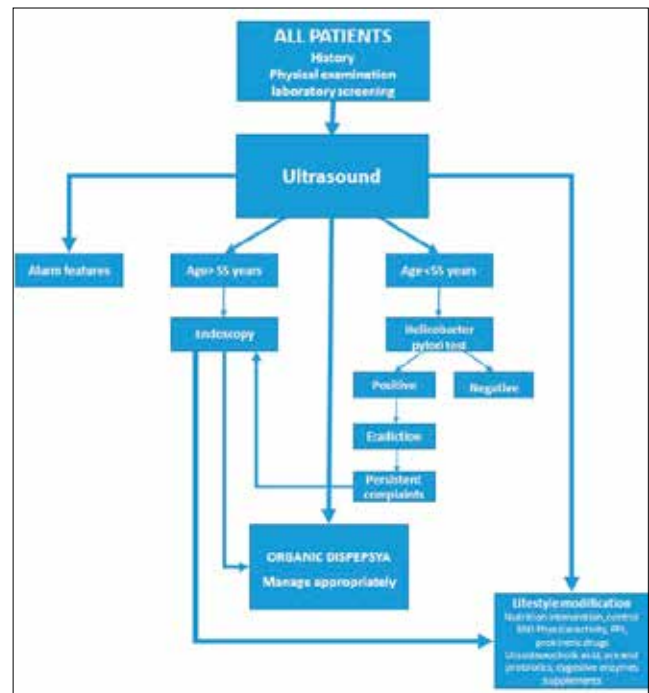
Number of patients	BMI less than 20	BMI 20 – 25 %	BMI 25 – 30 %	BMI more than 30
3000	183	399	699	1719
%	6,1 %	13,33 %	23,33 %	57,33 %

**Table 3.** Dyspepsia and obesity in patients in our sample

The frequency of pathologic findings shows (Table 2). Obesity is an estimated risk factor for development symptoms of dyspepsia. Of 3000 dyspeptic patients more than half have pathologic obesity (Table 3). Controlled weight loss and some nutritional intervention are very effective in improving symptoms of dyspepsia. A new approach to managing dyspepsia at the primary care level is shown in the next algorithm (Figure 1).

#### 5. DISCUSSION

Most patients with dyspepsia belong to the primary care level for diagnostic and therapeutic management. The primary care physician (PCP) has a central role in providing cost-effective, rational diagnostic and therapeutic procedures to meet population needs and satisfy their patients. Most dyspeptic patients in primary care can be managed without endoscopic and imaging procedures, but it is difficult to select an appropriate strategy on the basis of history and physical examination alone (3). Clinical guidelines recommend in diagnostic evaluation the upper gastrointestinal endoscopy and test for *Helicobacter pylori* (HP) as a gold standard (1, 2, 3, 4, 5). Experiences in practice shows that endoscopy cannot estimate all causes of organic dyspepsia, so some clinical studies recommend the use of ultrasound methods such as abdominal ultrasound (US) and endoscopic ultrasound to detect organic changes in liver, biliary tract and pancreas (4, 6). The usefulness of abdominal ultrasound is not definitively estimated. Gastroscopy and abdominal ultrasonography are the most commonly performed diagnostic investigations in the first line of managing dyspeptic symptoms. Abdominal ultrasonography as diagnostic procedure is not aggressive, it is easy to perform, inexpensive and becomes very popular in family medicine



**Figure 1.** Algorithm of management dyspepsia

practice, but there are few studies to assess the diagnostic value of US. One of these studies has reported only a few abnormality findings (4). Many doctors in family medicine have the certification and knowledge to perform abdominal ultrasonography (6).

Abdominal ultrasound, physical examination and BMI control have a significant value in diagnostic evaluation of dyspepsia (6). The therapeutic approach includes, besides general standards (acid suppressive drugs, eradication of *H. pylori*, prokinetic and antidepressant agents), life style modification and nutritional interventions as first line treatment (7). In this approach the use of new drugs such as ursodeoxycholic acid (UDCA), pre and probiotics, digestive enzymes supplements is recommended.

#### 6. CONCLUSION

Through the combination of different diagnostic procedures as first line methods including abdominal ultrasound and nutritional condition (BMI), a family doctor can manage successfully uninvestigated dyspepsia in primary care level.

**CONFLICT OF INTEREST: NONE DECLARED**

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