



## MEDICATIONS USED FOR TREATMENT OF DYSPESIA IN BABYLON PROVINCE

<sup>1, \*</sup> Farah Mushtaq Talib, <sup>1</sup>Fatima Adnan Hassan and <sup>2</sup>Adil Abbas Kareem

<sup>1</sup>Department of Pharmaceutics-College of Pharmacy-University of Babylon, Iraq

<sup>2</sup>College of Education for Pure Sciences-University of Karbala, Iraq

Received 15<sup>th</sup> June 2025; Accepted 18<sup>th</sup> July 2025; Published online 22<sup>nd</sup> August 2025

### Abstract

Dyspepsia is a disorder characterized by dyspeptic symptoms which are located in the epigastrium and related to digestion of food in the initial part of the digestive system. Immune and mucosal function changes, gastric dysmotility, different composition of the gastrointestinal microbiota, and altered central nervous system processing are considered responsible for the onset of the disorder. Research practical part performed according to the data collected by an information from. Data included 160 patients suffering from dyspepsia. Results showed that approximately 70% of those suffering from dyspepsia are women and 30% are male, and 77% of these patients were 20-29 years of age. 42% of study patients, ppis were the most effective medicines used alone or in combination with antibacterials for the eradication of helicobacter pylori, while 17% of patients with dyspepsia don't take any treatment. In conclusion: there is no clear way for the treatment of dyspepsia among population may be due to differences in living levels and conditions and the educational status.

**Keywords:** Dyspepsia, Epigastrium, Symptoms.

### INTRODUCTION

Dyspepsia refers to discomfort or pain felt in the upper abdomen [1]. Discomfort may be characterized by or related to bloating, abdominal fullness, early satiety, or nausea, which are usually accompanied by the component of upper abdominal distress [2]. The term functional dyspepsia (fd) is often regarded as a synonym for nonnuclear dyspepsia or nonorganic or essential dyspepsia [3]. This disease is one of the most common chronic digestive disorders affecting humans, with an incidence rate ranging from 7% to 41% [4]. Although dyspepsia is not a life-threatening state, it may reduce the quality of life [5]. And controlling its symptoms is important. As the cause of dyspepsia is not identified completely, its efficient treatment is not yet possible [6,7]. This may be explained in part by the fact that dyspepsia is a heterogeneous syndrome, patients with irritable bowel syndrome, biliary tract disease, esophagitis, and other disorders may complain of ulcer-like symptoms, resulting in the broad and nonspecific diagnosis of dyspepsia [8,9]. There is no acceptable drug treatment for this disease [10]. Some related studies have reported that the patient response rate to anti-acid therapy equaled the response rate to placebo [11]. Others have shown no significant difference between the efficacy of h2 blockers and a placebo [12,13]. Or between the effectiveness of prokinetic and sucralfate and the placebo effect [10,14]. Recent studies have shown that social and psychological effects can affect the ratio of symptoms and healthcare-seeking behaviors in patients with functional gastrointestinal disorders such as dyspepsia [15]. Functional dyspepsia is a syndrome with a multifactorial etiology which is related to irritable bowel syndrome [16,17]. Since psychological factors and disorders affect the acuteness of symptoms in these patients, researchers have shown a greater tendency toward utilizing the psychological approaches for such patients [18].

### Pathophysiology

Multiple mechanisms are involved with specific combinations of physiologic, genetic, environmental, and psychological factors that are responsible for the different symptoms. Functional and structural changes are described in **fd** as gastric abnormalities (impaired accommodation, delayed emptying, and hypersensitivity). a number of duodenal abnormalities may also be responsible for the generation of symptoms, such as increased sensitivity to duodenal acid, increased sensitivity to duodenal lipids, and low-grade inflammation [19].

### Psychosocial Factors

It is well-known that stress also plays a significant role in the development of **fd**. An important intrinsic role for psychosocial factors and psychiatric disorders, especially anxiety and depression, has been described in the etiopathogenesis of **fd**, in addition to their putative influence on health care-seeking behavior. Compared with controls with organic disease, haug et al [20]. show higher levels of anxiety and depression in adult patients with **fd**. Approximately **50%** of children and adolescents with **fd** demonstrate elevated anxiety scores [21]. Stress is associated with activation of the hypothalamus, which releases corticotrophin-releasing factor, with a significant response including inflammation (particularly mast cell activation), sympathetic nervous system activation, altered gastric accommodation, gastric dysmotility, and visceral hypersensitivity [22].

### Treatment / Mangment

#### 1-Non Pharmacological Treatment

Dietary recommendations in functional dyspepsia include eating smaller meals and avoiding high-fat meals which have been reported to aggravate clinical symptoms such as nausea and abdominal pain more than isocaloric high-carbohydrate

\*Corresponding Author: Farah Mushtaq Talib,

Department of pharmaceutics-College of pharmacy-University of Babylon, Iraq.

meals [23]. In the study [24], intake of dietary fat aggravated clinical symptoms of dyspepsia in patients attending the clinic. Although talley and colleagues reported that smoking, alcohol, aspirin and the use of nonsteroidal anti-inflammatory drugs (nsaids) was not associated with an increased risk of functional dyspepsia in outpatients presenting for endoscopy [25]. However, in view of the rome iv criteria stanghellini and colleagues recently recommended that besides more frequent, smaller meals and avoiding a high-fat diet, patients with functional dyspepsia should avoid nsaid use, coffee, alcohol, and smoking.

**Pharmacological Treatment**

**A-Helicobacter Pylori (H Pylori):** Eradication is recommended as the first treatment for all patients with functional dyspepsia. This improves symptoms and decreases the risk of peptic ulcers and gastric cancer. The testing is usually performed at the time of upper endoscopy performed for investigating dyspepsia. However, if the testing was not performed during the upper endoscopy, the diagnosis of *H. pylori* should be made with a stool antigen assay or urea breath test [26,27].

**B-Proton Pump Inhibitors (PPIs):** Ppis for 4 to 8 weeks are Recommended For Patients Who Initially Test negative for h pylori and those with persistent symptoms 4 weeks after the eradication of h pylori confirmed by stool antigen testing, urea breath test, or upper endoscopy-based testing. They are thought to decrease mast cells, duodenal eosinophils, and mucosal permeability[28]. in patients whose symptoms improve with ppis, ppi therapy should be discontinued every 6 to 12 months to reduce the long-term risk of therapy.

**C-Prokinetic Agents:** Although delayed gastric emptying is considered a major pathophysiological mechanism in functional dyspepsia, the efficacy of prokinetic drugs to treat this dyspepsia has not been clearly established [29,30]. Problems with studies evaluating prokinetic agents include small sample size, patient heterogeneity, and poor quality design. Nevertheless, prokinetic agents such as metoclopramide, cisapride, mosapride citrate, itopride hydrochloride and domperidone continue to be widely used for the therapy of functional dyspepsia worldwide [29,31-33]. Recent reviews and meta-analyses suggest that domperidone and cisapride are more effective than placebo [34, 35].

**D-Antidepressants:** Antidepressants have been only marginally explored in functional dyspepsia. Serotonin reuptake inhibitors (ssri) have the potential of relieving functional dyspepsia because they increase the availability of synaptically released 5-ht (pro-motility) not only at the central nervous system, but also at the level of the enteric nervous system [29,30]. Amitryptilline and 5-ht-3 receptor antagonists have been investigated mainly in ibs and the few studies performed in functional dyspepsia have provided conflicting results. Also, kappa-opioid receptor agonists might be useful for functional dyspepsia because of their antinociceptive effects, but available results in functional dyspepsia are inconclusive [36,37].

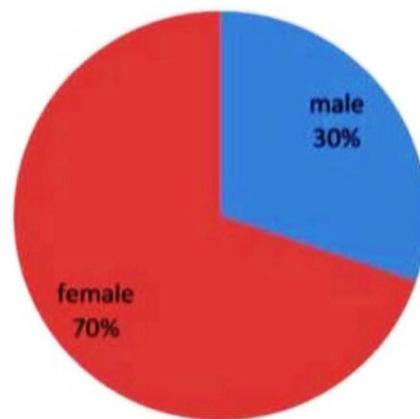
**METHODOLOGY**

Research practical part was started on 2025/1/19, according to the information collected by the following from. Data included 160 patients suffering from dyspepsia.

Seq	Age	Gender	Duration of Disease	Drug Name	Company	Name Of Disease
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

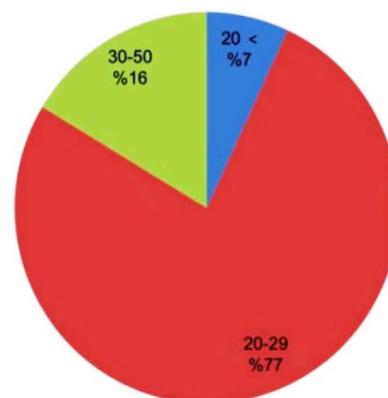
**RESULTS AND DISCUSSION**

After collecting the information regarding the age, gender, and the name of medications used for the treatment of dyspepsia, then analysis by figures was performed as follow:



**Figure 1. The distribution of the study samples according to gender**

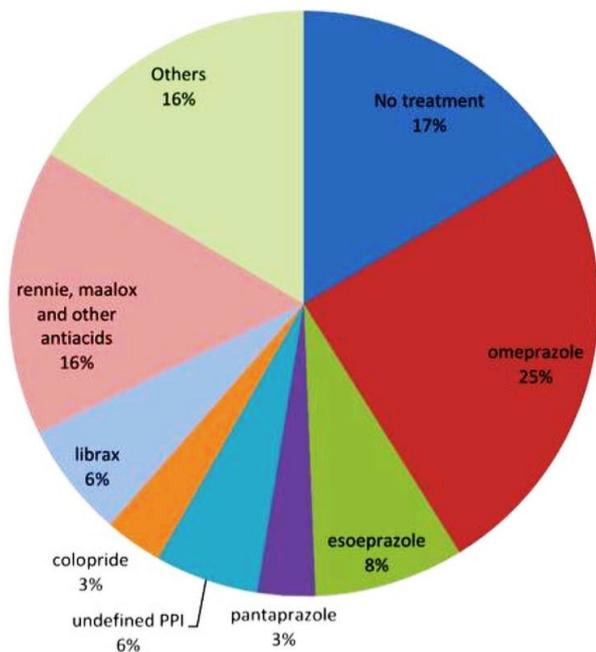
According to the results we obtained, it was found that approximately 70% of those suffering from dyspepsia are women and 30% are male. This may be due to various reasons, for example, female taking contraceptive control pills and estrogen, or the causes include decreased motility of the gut during gestation and an increase in intra-abdominal pressure by the enlarging uterus [38].



**Figure 2. The distribution of the study sample according to age**

The results according to age showed that less than 7% of patients with dyspepsia who are less than 20 years old, and 16% of patients who are between 30-50 years of age, and the largest percentage, 77%, of patients are 20-29 years of age. The reasons may be different. It may be due to psychological conditions, anxiety, depression, life pressures, or unhealthy eating. As for older patients, indigestion may be the result of

other diseases, such as crohn's disease, or due to taking some medications, such as nasid, theophylline, mao inhibitors, corticosteroids [39,40].



**Figure 3. The medications that used for the treatment of dyspepsia in this study**

The present study has shown that dyspepsia commonly and quite considerably impaired the overall state of health, after we asked indigestion patients about the medications they used, we found the percentages below:

It was found through the questionnaire that 42% of people, ppis are amongst the most effective medicines used for the treatments of gastric and duodenal ulcers (25% used omeprazole); they are also used in combination with antibacterials for the eradication of helicobacter pylori (a bacteria that is common cause of ulcer), ppis can be used for the treatment of dyspepsia and gastro-oesophageal reflux disease, they are also used for the prevention and treatment of nsaid-associated ulcers. Ppis are generally considered interchangeable; selection of agent is usually based on cost and formulary considerations [41]. 8% Esoeprazole, 3%pantaprazole also ppi inhibitors have same above benefit and 16% take antacid (rennie, maalox) due to : rapid onset of activity, and effective on the fluid already present in the stomach basic compounds that neutralize hydrochloric acid in the gastric secretions. They are used in the symptomatic management of gastrointestinal disorders associated with gastric hyperacidity such as dyspepsia, gerd, and peptic ulcer disease [42]. 17% don't take treatment with dyspepsia may be due to the presence of a high percentage of people suffering from indigestion, they do not seek treatment when afflicted with some diseases, and this reflects the culture of many in society, and this reflects negatively on the entire health situation. Perhaps some people with indigestion do not take treatment because they are away from the causes, this is a positive thing for the culture of some patients 6%of indigestion patients used librix to treat stomach ulcers, irritable bowel syndrome, and acute enterocolitis, which is an infection of the colon. Librax contains the medicines hcl chlordiazepoxide (benzodiazepines) and bromide clidinium (anticholinergics/antispasmodics). Librax 5 mg/2.5 mg tablet is used for the

treatment of irritable bowel syndrome (symptoms include abdominal pain, cramping, bloating, and diarrhea or constipation). Prevents sudden muscle spasms to relieve stomach pain and cramps. It also promotes easy gas passage to reduce stomach discomfort [43]. Coloprid we found used about 3%among patients of have dyspepsia mebeverine hci + sulphiride + simethicone tablets, 135mg + 25mg + 180mg antispasmodics are the main stay of otc treatment of ibs. They work by a direct effect on the smooth muscle of the gut, causing relaxation and thus reducing abdominal pain. Indigestion is one of the symptoms of irritable bowel syndrome, so patients have shown benefit from this treatment [44].

## REFERENCES

1. Talley n. Functional dyspepsia: a classification with guidelines for diagnosis and management. *Gastroenterol int* 1991;4:145-60.
2. Talley nj, stanghellini v, heading rc, koch kl, malagelada jr, tytgat gn. Functional gastroduodenal disorders. *Gut* 1999;45 suppl 2:ii37-42.
3. Dobrilla g. In: cheli r, molinari f, editors. Functional dyspepsia: problems of classification, pathophysiology, diagnosis and therapy. Pirenzepine. Knowledge and new trends. New york: raven press; 1986. p. 43-48.
4. Talley nj, zinsmeister ar, schleck cd, melton lj 3rd. Dyspepsia and dyspepsia subgroups: a population-based study. *Gastroenterol* 1992;102:1259-68.
5. Talley nj, weaver al, zinsmeister ar. Impact of functional dyspepsia on quality of life. *Digestive diseases and sciences* 1995;40:584-589.
6. Lagarde sp, spiro hm. Non-ulcer dyspepsia. *Clin gastroenterol* 1984;13:437-46.
7. Dal monte pr. Treatment of non-ulcerative dyspepsia. *hepatogastroenterology* 1983;30:1-2.
8. Richter je. Dyspepsia: organic causes and differential characteristics from functional dyspepsia. *scand j gastroenterol suppl* 1991;182:11-6.
9. Krag e. Other causes of dyspepsia-especially abdominal pain of spinal origin. *Scand j gastroenterol suppl* 1982;79:32-4.
10. Talley nj, holtmann g. Holtmann approach to the patient with dyspepsia and related functional gastrointestinal complaints. *Princ clin gastroenterol* 2008:38-61.
11. Talley nj, vakil n, ballard ed 2nd, fennerty mb. Absence of benefit of eradicating helicobacter pylori in patients with nonulcer dyspepsia. *N engl j med* 1999;341:1106-11.
12. Bortolotti m, coccia g, grossi g, miglioli m. The treatment of functional dyspepsia with red pepper. *Aliment pharmacol ther*2002;16:1075-82.
13. Talley nj, mcnail d, hayden a, piper dw. Randomized, double-blind, placebo-controlled crossover trial of cimetidine and pirenzepine in nonulcer dyspepsia. *Gastroenterol* 1986;91:149-56.
14. Skoubo-kristensen e, funch-jensen p, kruse a, hanberg-sorensen f, amdorp e. Controlled clinical trial with sucralfate in the treatment of macroscopic gastritis. *Scand j gastroenterol* 1989;24:716-20.
15. Mikaeili n, hajloo n, narimani m, pournikdast s. Effectiveness of multi-modal lazravs and multi-modal spiritual-religious, of physical symptoms and quality life in patients with functional dyspepsia. *J asian sci res* 2015;5:534.

16. Porcelli p, de carne m, fava ga. Assessing somatization in functional gastrointestinal disorders: 17 Integration of different criteria. *Psychother psychosom* 2000;69:198-204.
17. Mccullough rw. Ibs, nerd and functional dyspepsia are immuno-neuronal disorders of mucosal cytokine imbalances clinically reversible with high potency sucralfate. *med hypotheses* 2013;80:230-3.
18. Kroenke k, rosmalen jg. Symptoms, syndromes, and the value of psychiatric diagnostics in patients who have functional somatic disorders. *Med clin north am* 2006;90:603-26.
19. Feinle-bisset c, vozzo r, horowitz m, et al. Diet, food intake, and disturbed physiology in the pathogenesis of symptoms in functional dyspepsia. *Am j gastroenterol* 2004; 99:170-181.
20. Haug tt, wilhelmsen i, berstad a. Life events and stress in patients with functional dyspepsia compared with patients with duodenal ulcer and healthy controls. *Scand j gastroenterol* 1995; 30:524-530.
21. Schurman jv, danda ce, friesen ca, et al. Variations in psychological profile among children with recurrent abdominal pain. *J clin psychol med settings* 2008; 15:241-251.
22. Hou xh, zhu lr, li qx, et al. Alterations in mast cells and 5-HT positive cells in gastric mucosa in functional dyspepsia patients with hypersensitivity. *Neurogastroenterol motil* 2001; 13:398-399.
23. Mazzoleni le, sander gb, francesconi cf, mazzoleni f, uchoa dm, de bona lr, milbradt tc, von reisswitz ps, berwanger o, bressel m, et al. Helicobacter pylori eradication in functional dyspepsia: heroes trial. *Arch intern med*. 2011;171:1929-1936. [pubmed] [google scholar]
24. Malfertheiner p, mossner j, fischbach w, layer p, leodolter a, stolte m, demleitner k, fuchs w. Helicobacter pylori eradication is beneficial in the treatment of functional dyspepsia. *Aliment pharmacol ther*. 2003;18:615-625.
25. Froehlich f, gonvers jj, wietlisbach v, burnand b, hildebrand p, schneider c, saraga e, beglinger c, vader jp. Helicobacter pylori eradication treatment does not benefit patients with nonulcer dyspepsia. *Am j gastroenterol*. 2001;96:2329-2336.
26. Tomita t, oshima t, miwa h. New approaches to diagnosis and treatment of functional dyspepsia. *Curr gastroenterol rep*. 2018 oct 18;20(12):55.
27. Addula m, wilson ved, reddymasu s, agrawal dk. Immunopathological and molecular basis of functional dyspepsia and current therapeutic approaches. *Expert rev clin immunol*. 2018 oct;14(10):831-840.
28. Wallaert b, desreumaux p, copin mc, et al. Immunoreactivity for interleukin 3 and 5 and granulocyte/macrophage colony-stimulating factor of intestinal mucosa in bronchial asthma. *J exp med*. 1995; 182(6): 1897-1904.
29. Tack j, lee kj. Pathophysiology and treatment of functional dyspepsia. *J clin gastroenterol* 2005; 39: S211-S216
30. Talley nj, axon a, bytzer p, holtmann g, lam sk, van zanten s. Management of uninvestigated and functional dyspepsia: a working party report for the world congresses of gastroenterology 1998. *Aliment pharmacol ther* 1999; 13: 1135-1148
31. Talley nj, axon a, bytzer p, holtmann g, lam sk, van zanten s. Management of uninvestigated and functional dyspepsia
32. Goves j, oldring jk, kerr d, dallara rg, roffe ej, powell ja, taylor md. first line treatment with omeprazole provides an effective and superior alternative strategy in the management of dyspepsia Compared To Antacid/alginate liquid: a multicentre study in general practice. *Aliment pharmacol ther* 1998; 12: 147-157
33. Malfertheiner p, stanghellini v, galmiche jp, jones rh. Review article: managing the dyspeptic patient- an interactive discussion. *Aliment pharmacol ther* 2001; 15 suppl 2: 14-19
34. Veldhuyzen van zanten sj, jones mj, verlinden m, talley nj. Efficacy of cisapride and domperidone in functional (nonulcer) dyspepsia: a meta-analysis. *Am j gastroenterol* 2001; 96: 689-696
35. Sturm a, holtmann g, goebell h, gerken g. Prokinetics in patients with gastroparesis: a systematic analysis. *Digestion* 1999; 60: 422-427
36. Talley nj, van zanten sv, saez lr, dukes g, perschy t, heath m, kleoudis c, mangel aw. A dose-ranging, placebo-controlled, randomized trial of alosetron in patients with functional dyspepsia. *Aliment pharmacol ther* 2001; 15: 525-537
37. Tack j, broekaert d, coulie b, fischler b, janssens j. Influence of the selective serotonin re-uptake inhibitor, paroxetine, on gastric Sensorimotor function in humans. *Aliment pharmacol ther* 2003; 17: 603-608
38. Gabbe: obstetrics, normal and problem pregnancies, 5th edition, p 1124
39. Mounsey, anne; barzin, amir; rietz, ashley (2020-01-15). "Functional dyspepsia: evaluation and management".
40. Ford ac, moayyedi p (2013). "Dyspepsia) archived from the original
41. Michael am, jason. Frequently prescribed medications. Third edition 2019.
42. Martindale: the complete drug reference, 38 th edition. Pharmaceutical press 2014
43. Copyrights 2024 all rights reserved by medicover hospitals (a unit of sahrudaya health care private limited
44. Alison blenkinsopp, paul paxton and john blenkinsopp. Symptoms in the pharmacy . A guide to the managements of common illness. 7Th edition. 2014

\*\*\*\*\*