

PROFILE OF DYSPESIA PATIENTS IN MANGUSADA HOSPITAL

Dewa Ayu Erica Fleury¹, Putu Indah Budi Apsari²,
Sri Masyeni^{3*}

¹⁻³Faculty of Medicine and Health Sciences, Universitas Warmadewa

Correspondence email: sri.masyeni@warmadewa.ac.id

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ABSTRACT

Dyspepsia is a common upper gastrointestinal disorder that may reduce patients' quality of life. The high number of dyspepsia visits at Mangusada Regional General Hospital, Badung, throughout 2024 highlights the need to understand patient characteristics as a basis for clinical evaluation and decision-making. This study aimed to describe the characteristics of patients with dyspepsia based on age, sex, clinical symptoms, comorbidities, medication use, and endoscopic examinations at Mangusada Regional General Hospital in 2024. This study employed a descriptive observational design with a cross-sectional approach. Data were obtained from the medical records of dyspepsia patients attending the Internal Medicine outpatient clinic during 2024. Samples were selected using simple random sampling, and the data were analyzed descriptively. The results showed that dyspepsia patients were generally older adults and more frequently female. Common clinical symptoms included epigastric pain, nausea, and bloating, with some patients experiencing multiple complaints. A proportion of patients had comorbid conditions, most commonly hypertension and diabetes mellitus. Dyspepsia management in this study was predominantly empirical, with acid-suppressive therapy, particularly Proton Pump Inhibitors (PPIs), being the most commonly used treatment. Endoscopic examinations were performed selectively based on clinical indications. In conclusion, dyspepsia patients at Mangusada Regional General Hospital in 2024 were mainly older adults presenting with upper gastrointestinal symptoms and were primarily managed using an empirical approach. These findings emphasize the importance of comprehensive clinical assessment and the selective use of therapeutic and diagnostic interventions in the management of dyspepsia.

Keywords: Dyspepsia, Endoscopy, Medication Use, Patient Characteristics.

INTRODUCTION

Dyspepsia is one of the most common upper gastrointestinal disorders worldwide and places a significant burden on healthcare systems (Alqurain, A. A. et al, 2024). The main symptoms include pain or discomfort in the epigastrium, accompanied by nausea, vomiting, early satiety, feeling full after

eating, belching, or heartburn. Dyspepsia can be divided into two main groups, namely organic dyspepsia and functional dyspepsia. Organic dyspepsia occurs when structural or pathological abnormalities are found on examination, such as peptic ulcers, erosive gastritis, stomach cancer, or

gastroesophageal reflux disease (GERD), while functional dyspepsia does not show clear structural abnormalities on endoscopic examination (Chaves, J., Pita, I., Libânio, D. & Pimentel-Nunes, P, 2023). Dyspepsia syndrome can have a significant overall impact on sufferers in terms of health, economics, quality of life, and psychosocial aspects. Globally, the burden of dyspepsia is quite high. A meta-analysis of 44 studies from 40 countries, involving more than 256,000 participants, reported a global prevalence of functional dyspepsia of 8.4%, ranging from 0.7% in India to 38.3% in Pakistan. In Indonesia, a national survey reported a prevalence of dyspepsia complaints reaching 40-50%, with an estimated increase in cases from 10 million people in 2020 to 28 million people (11.3% of the population). Dyspepsia not only affects physical health but also reduces quality of life, disrupts work productivity, and increases healthcare costs (Endo, K. et al, 2023).

The elderly have a higher risk of experiencing organic dyspepsia than younger age groups. This is due to decreased regenerative function of the gastric mucosa, changes in gastrointestinal motility, and an increased prevalence of comorbidities such as diabetes, kidney failure, or cardiovascular disease, which can affect gastrointestinal function. Previous research on 466 elderly patients with dyspepsia complaints showed that 6% suffered from organic dyspepsia, with the main causes being peptic ulcers (32.1%), erosive esophagitis (28.6%), stomach cancer (17.9%), and Barrett's esophagus (10.7%). Multivariate analysis showed that male gender and low body mass index ($<18.5 \text{ kg/m}^2$) were significant risk factors (Ford, A. C.,

Mahadeva, S., Carbone, M. F., Lacy, B. E. & Talley, N. J, 2020). From a pathophysiological perspective, organic dyspepsia is usually caused by structural or biochemical abnormalities that can be identified through examination, such as mucosal inflammation due to *H. pylori* infection, damage due to excess stomach acid, or neoplastic processes in the stomach. *H. pylori* infection is an important factor, as this bacterium can cause chronic gastritis, peptic ulcers, and even stomach cancer. The prevalence of *H. pylori* in Asia, including Indonesia, is relatively high, making eradication of this bacterium an important component in the management of organic dyspepsia (Lee, K. et al, 2024). Mangusada Hospital Badung, as the main referral hospital in Badung Regency, recorded 3,639 patient visits with a diagnosis of dyspepsia during the 2024 period. This figure shows that dyspepsia is among the most common complaints at this facility.

LITERATURE REVIEW

The presence of chronic diseases or comorbidities is significantly associated with dyspepsia. Conditions such as diabetes mellitus, metabolic diseases, psychiatric disorders, and other chronic diseases were found to increase the likelihood of dyspepsia. Comorbidities can affect gastrointestinal function through various mechanisms, including neuropathy, systemic inflammation, long-term medication effects, and dysregulation of the autonomic nervous system. Therefore, the presence of comorbidities in some patients in this study is consistent with the international literature, although in this study the proportion

of patients without comorbidities was higher (Surawan DP. et al, 2018).

RESEARCH METHOD

The research design used was a descriptive observational design. Descriptive observational research aims to tabulate the characteristics of a phenomenon or condition; in this case, the characteristics of patients with dyspepsia syndrome and their medication use. This study used data from past medical records. Data collection was not conducted directly from patients, but rather using secondary data obtained from patient medical records that were already available at Mangusada Hospital during the 2024 period. The approach used was cross-sectional, with all data collected at a single point in time.

The study population was all dyspepsia patients at Mangusada Hospital in 2024 (n=3,639). The sample was taken using simple random sampling of 102 patients who met the inclusion and exclusion criteria. Inclusion criteria: patients aged ≥ 17 years with a diagnosis of dyspepsia, patients examined at the Internal Medicine Clinic, and complete medical records. Exclusion criteria: patients with incomplete medical records or unclear diagnoses.

Age: Patient age based on the difference in years between the date of birth and the examination date. Medical record keeping, 17-25; 26-35; 36-45; 46-55; ≥ 56 years old, category Ordinal. Gender: Patient gender Male; Female Nominal. Chief complaint: Symptoms experienced by the patient. Heartburn; Bloating; Nausea; Belching; Feeling full; Loss of appetite, Nominal. History of

Comorbidities, Other diseases in patients with dyspepsia. With comorbidity (Hypertension, Diabetes Mellitus, Kidney Disease) and without comorbidity. Use of Medication, Types of prescribed medication. Containing PPIs; Does not contain PPI. Endoscopy: Endoscopic examination. Yes/no

Data were collected from the medical records of patients at Mangusada Regional General Hospital in 2024 using structured forms. Variables included age, gender, clinical symptoms, **and** history of comorbidities, medication use, and endoscopic examination. Analysis used descriptive methods with frequency distribution and percentages using Microsoft Excel and SPSS. This study received ethical approval from the Mangusada Hospital Health Research Ethics Committee (number: 000.9/10057/RSDM/2025, dated September 22, 2025) and complied with the principles of beneficence, non-maleficence, respect for persons, and justice.

RESEARCH RESULTS

This section presents the results of the univariate analysis of 102 dyspepsia patients who met the study's inclusion criteria. Univariate analysis was performed to tabulate the distribution of patient characteristics, including age, gender, clinical symptoms, history of comorbidities, use of dyspepsia medication, and endoscopic examination. The results of this analysis aim to provide a general table of the profile of dyspepsia patients in the study population before further analysis is carried out.

Table 1. Distribution Table of Dyspepsia Patients Based on Age and Gender.

Characteristics Age (years)	n (102)	%
17-25	10	9,8
26-35	16	15,7
36-45	13	12,7
46-55	20	19,6
≥56	43	42,2
Gender		
Male	46	45,1
Female	56	54,9
Total	102	100
Clinical Symptoms	69	67,6
Heartburn		
Nausea	62	60,8
Bloating	27	26,5
Fullness	3	2,9
Belching	2	2,0
Loss of appetite	1	1,0
History of Comorbidities	73	71,6
No Comorbidities		
There is Comorbidity	29	28,4
Dyspepsia Medication	74	72,5
Therapy Containing PPIs		
Does not contain PPI	28	27,5

Based on Table 2, the age distribution shows that among the total 102 dyspepsia patients, the largest age group was ≥56 years, with 43 patients (42.2%). The 46-55 age group was the next largest with 20 patients (19.6%), followed by the 26-35 age group with 16 patients (15.7%), the 36-45 age group with 13 patients (12.7%), and the 17-25 age group with 10 patients (9.8%). The average age of the patients was 47.2 years. Based on the table, 102 dyspepsia patients were included: 46 (45.1%) male and 56 (54.9%) female. These results show that in this study, dyspepsia patients were more commonly found in women than in men. Based on Table 3, the most common clinical symptoms were heartburn in 69 patients (67.6%), followed by nausea in 62 patients (60.8%), and flatulence in 27 patients (26.5%). In addition to

these four symptoms, other symptoms such as feeling full after eating (2.9%), belching (2.0%), and decreased appetite (1.0%) were found in much smaller proportions. Overall, 164 symptoms were reported by 102 patients, indicating that most patients experienced more than one complaint. Based on Table 4, 29 of the 102 dyspepsia patients (28.4%) had comorbidities, while 73 (71.6%) did not. These findings indicate that the majority of dyspepsia patients in this study had comorbidities, which could affect the course of the disease, clinical manifestations, and therapeutic response. Among these 29 patients, several comorbidities were found, such as hypertension (27.6%), diabetes mellitus (20.7%), kidney disease (10%), and other heart diseases. These diseases are also common in adults and the elderly,

which can increase the risk of gastrointestinal complaints. Based on Table 5, the most commonly used drug for the management of dyspepsia was a proton pump inhibitor (PPI), used by 74 patients (72.5%). The PPIs used were omeprazole and lansoprazole. Meanwhile, 28 patients (27.5%) used non-PPI medications, including antacids, H₂-receptor antagonists, and prokinetic drugs. These results indicate that PPIs are the most dominant therapy prescribed, in line with national and international clinical guidelines that recommend PPIs as first-line therapy for patients with dyspepsia symptoms, especially those suspected of having functional

dyspepsia or organic dyspepsia related to hyperacidity. Based on endoscopic support examinations in patients with dyspepsia, it was found that only a small proportion of patients underwent this examination. Of 102 patients, 7 (6.9%) underwent endoscopy, while 93 (93.1%) did not. These findings indicate that the majority of dyspepsia patients in this study did not undergo endoscopic examination. The results of endoscopic examinations in several patients showed that erosive gastritis was the most common finding, and some patients did not exhibit structural abnormalities.

DISCUSSION

Gender Distribution

The results showed that of the 102 patients with dyspepsia, 56 were female (54.9%) and 46 were male (45.1%). This finding is consistent with several studies that report dyspepsia complaints are more common in women. Previous study shows that women have a higher prevalence of dyspepsia than men, especially functional dyspepsia (Krynicka, P. et al, 2025).

This is thought to be related to hormonal factors, higher visceral sensitivity, and the more dominant role of psychosocial stress in women. In addition, other studies also confirm that women are more prone to gut-brain interaction disorders, which is the main mechanism in functional dyspepsia (Liu, L. et al, 2022). In the elderly population, the difference in prevalence between men and women is not very noticeable, but the tendency for women to experience more chronic dyspepsia is still noted. Women also report gastrointestinal symptoms more often than men, which may be related to differences in pain

perception and neuroendocrine factors. In the elderly population, this difference remains apparent, though less pronounced than in the productive age group (Maracle, B. et al, 2024). Thus, the gender distribution in this study is consistent with global and national epidemiological data showing that dyspepsia complaints are slightly more prevalent in women. The results of this study are consistent with the literature showing that women are more likely to experience dyspepsia complaints, possibly related to neurohormonal factors and stress responses.

Age Distribution

The age distribution of patients shows that the ≥ 56 age group is the largest (42.2%), followed by the 46-55 age group (19.6%). The dominance of this elderly group is consistent with the study design, which specifically enrolled elderly patients with dyspepsia (Medić, B, 2021).

This age group is more prone to gastrointestinal complaints due to

physiological changes such as decreased gastric motility, gastric accommodation disorders, and decreased enteric nerve sensitivity, which cause digestive disorders to be more easily felt. In addition to physiological changes, the elderly population generally has comorbidities and uses long-term medications such as NSAIDs, antiplatelet agents, and antihypertensives, which can affect the gastric mucosa and increase the risk of dyspepsia complaints (Pasricha, P. J. & Talley, N. J., 2026). The prevalence of organic dyspepsia is said to be higher in the elderly age group (Surawan DP. et al. (2018). Gastrointestinal disorders, including both functional and organic dyspepsia, increase in older age due to physiological changes such as decreased gastrointestinal motility, changes in visceral sensitivity, and increased exposure to risk factors such as diet, long-term medication use, and metabolic conditions (Suzuki, H, 2021). International research shows that advanced age is an important risk factor for functional dyspepsia. In this study, multivariate analysis showed that as age increases, the risk of dyspepsia also increases, especially in populations above middle age (Qi, Q., Wang, N., Liu, H. & Li, Y, 2023). This is associated with physiological changes in the gastrointestinal tract that occur with aging, such as decreased gastrointestinal motility, increased visceral sensitivity, and changes in gut flora composition. These findings support the current study's results, which show that the ≥ 56 age group is most likely to experience dyspepsia.

Clinical Symptoms

The results showed that the most common complaints were heartburn (69 patients, 67.6%), nausea (62 patients, 60.8%), and

flatulence (27 patients, 26.5%). Symptoms such as belching, feeling full after eating, and loss of appetite were found in a small proportion of patients. These findings are consistent with the clinical presentation of dyspepsia in the literature. The most common manifestations of dyspepsia are epigastric pain and discomfort in the upper abdomen. Nausea is also a common complaint associated with gastroduodenal motility disorders. The dominant complaint of epigastric pain indicates that most patients likely fall into the Epigastric Pain Syndrome (EPS) category according to the Rome IV classification. What stands out in this study is that the prevalence of Postprandial Distress Syndrome (PDS) appears to be lower than in global studies. The most common complaints in dyspepsia include epigastric pain, epigastric burning, postprandial fullness, epigastric bloating, and nausea, which together form a pattern of symptoms almost identical to the findings of this study (Qi, Q., Wang, N., Liu, H. & Li, Y, 2023). These symptoms are also defined as the core of the Rome IV criteria, which emphasize that dyspepsia is a collection of complaints in the epigastric area, especially pain or discomfort after eating. Thus, the consistency of clinical symptoms in this study with journal findings strengthens the validity of the results and reflects the general clinical presentation of dyspepsia (Shafiq, S. & Wadhwa, R. P, 2021).

Comorbidities

The results showed that most dyspepsia patients had no comorbidities (73 patients, 71.6%), while 29 patients (28.4%) had comorbidities. This finding is reasonable because although comorbidities are common among

the elderly, not all elderly patients have a history of them. Many elderly individuals present with generally good health or only gastrointestinal complaints, without other chronic diseases (Maracle, B. et al, 2024).

In addition, the focus of the visit on dyspepsia complaints may make the recording of comorbidities more selective according to clinical relevance. In the group of patients with comorbidities, conditions such as hypertension, diabetes mellitus, or the use of certain medications may still play a role in influencing dyspepsia symptoms. Medications such as NSAIDs, antiplatelet agents, and some antihypertensives are known to irritate the gastric mucosa or affect gastrointestinal motility.

This indicates that although the proportion of comorbidities in this study was not high, comorbid conditions remain an important consideration in the clinical evaluation and management of elderly patients with dyspepsia.

Use of Dyspepsia Medication

This study shows that proton pump inhibitors (PPIs) are the most commonly prescribed therapy (72.5%). This reflects the application of clinical guidelines that place PPIs as the first-line therapy for dyspepsia, both functional and organic dyspepsia associated with hyperacidity. PPIs are highly effective at reducing gastric acid secretion, thereby helping relieve epigastric pain and reflux symptoms. The dominant use of PPIs is also in line with other studies which show that acid suppression therapy is the most common choice in the initial management of dyspepsia. In the group receiving non-PPI therapy (27.5%), the drugs used included antacids, H2RAs, and prokinetics. The use of non-PPI drugs may be appropriate for patients whose complaints are more dominant in

motility disorders, such as nausea or fullness after eating (Wang, Y.-P., Herndon, C. C. & Lu, C.-L, 2020).

PPIs, by suppressing the proton pump in parietal cells, reduce acid secretion more effectively and consistently than antacids or H₂-blockers. This makes them a safe and effective choice for symptoms suspected to be caused by acid. Overall, the treatment pattern in this study is consistent with the clinical approach commonly practiced in Indonesian healthcare facilities, where empirical therapy with PPIs is the initial step before further evaluation. More than 97% of acid suppressant prescriptions for outpatients and emergency department patients at a referral hospital in China were PPIs, and this percentage increased to nearly 100% in the period after stewardship intervention. These findings indicate the dominance of PPIs over H₂-RAs or other non-PPI agents in the management of gastric acidity, reinforcing that the high use of PPIs in this study reflects global clinical practice and is not merely a local phenomenon (Thanoon Al-Abachi, K, 2022).

Endoscopic Examination

Supportive

In this study, only 7 of 102 patients (6.9%) underwent endoscopic examination. This figure appears low, but is in line with clinical practice in internal medicine, especially in elderly patients with dyspepsia without alarm symptoms. Although age ≥ 50 years is a higher risk factor for organic findings, clinical guidelines do not require endoscopy in all patients in this age group; they recommend it only if there are alarm signs, persistent symptoms, or a poor response to therapy. In this study, most elderly patients did not show significant alarm signs, so endoscopy

was not a diagnostic priority. This is consistent with common practice in Indonesian healthcare facilities, where invasive procedures, such as endoscopy, are performed selectively, taking into account clinical condition, comorbidities, patient comfort, and the effectiveness of the empirical therapy already administered.

Endoscopic findings of significance in patients with dyspepsia are relatively low. Another study showed that 70.2% of patients had normal endoscopic results or only showed non-significant abnormalities, while significant lesions were found in only 29.8% of patients. Another study also report the finding of normal endoscopy results was as high as 18.65%. The high proportion of non-significant findings confirms that endoscopy is not a routine examination for all dyspepsia patients, especially if there are no alarm symptoms. Endoscopy is more beneficial when targeted at high-risk groups, particularly patients aged ≥ 50 years or those showing alarm signs such as anemia, weight loss, or persistent vomiting. In this study, the majority of elderly patients did not show significant alarm symptoms, so endoscopy was not a diagnostic priority (Simngam, N. et al, 2025).

CONCLUSION

Dyspepsia patients at Mangusada Regional General Hospital in 2024 were predominantly by female elderly, with the main complaints being epigastric pain and nausea. Most patients had comorbidities, mainly hypertension and diabetes mellitus. Therapy was dominated by proton pump inhibitors accompanied with symptomatic drugs, while endoscopy was rarely performed in accordance to selective clinical

indication and strict criteria based on alarm symptoms.

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