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SOME CLINICAL, SUB-CLINICAL CHARACTERISTICS AND QUALITY OF LIFE IN PATIENTS WITH FUNCTIONAL DYSPEPSIA

Dao Truong Giang[1]*, Pham Quang Phu[1]
Tran Thi Thanh Phuong[1], Duong Xuan Nhuong[1]

ABSTRACT

Objective: *To describe some clinical characteristics, endoscopic lesions, H. pylori infection status, and assess quality of life in a group of patients with functional dyspepsia.*

Subjects and methods: *A cross-sectional descriptive study of 160 patients with functional dyspepsia, examined and treated at the Gastroenterology Clinic, Military Hospital 103, from November 2024 to March 2025. Functional dyspepsia was diagnosed according to the Rome IV criteria. The severity of functional dyspepsia was assessed using the LDQ scale. Quality of life was assessed using SF-NDI.*

Results: *The average age of patients with functional dyspepsia was 47.69 ± 15.13 years. Common clinical symptoms included epigastric pain (85.6%), postprandial fullness (73.1%), belching (63.1%), early satiety (55.0%), heartburn (54.4%), nausea (51.2%), and epigastric burning (50.6%). Gastroscopy revealed edematous and congestive lesions (74.4%) and flat and raised erosions (20.6%). 26.9% of patients were infected with H. pylori. According to the LDQ scale, the proportion of patients with moderate dyspepsia was 40.0% and severe dyspepsia was 31.9%. According to the SF-NDI, the proportion of patients experiencing significant impact on their quality of life was 58.8%.*

Conclusion: Functional dyspepsia has many clinical and sub-clinical manifestations, significantly affecting the quality of life of patients. Combining the assessment of disease symptoms and patient quality of life is essential in the management and treatment of patients with functional dyspepsia.

Keywords: Functional dyspepsia, gastritis, quality of life.

Content responsibility: Dao Truong Giang, Email: giangle127@gmail.com

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[1]*Military Hospital 103.*

1. INTRODUCTION

Functional dyspepsia is one of the common functional digestive disorders and a frequent cause of many patients seeking gastroenterology consultations. The disease is functional in nature, with little or no physical damage, but it is often chronic, prone to recurrence, and significantly affects the quality of life of patients [1]. Diagnosis and treatment of functional dyspepsia are based on clinical examination, gastroduodenal endoscopy, Helicobacter pylori (H. pylori) testing, and assessment of related lesions. In addition, the assessment of symptom severity and quality of life of patients using the Leeds Dyspepsia Questionnaire (LDQ) [2] and Short-Form Nepean Dyspepsia Index (SF-NDI) [3] scales is increasingly being considered, aiming for a more comprehensive approach in disease management and treatment.

Currently, there are not many studies on patients with functional dyspepsia at Military Hospital 103 and other major hospitals, especially studies that simultaneously assess endoscopic gastric lesions, H. pylori infection status, and patient quality of life through scoring systems. Our study aims to describe some clinical characteristics, endoscopic gastric lesions, H. pylori infection status, and assess the quality of life of patients with functional dyspepsia.

2. SUBJECTS AND METHODS

2.1. Subjects

160 patients (pts) with functional dyspepsia, examined and treated at the Gastroenterology Clinic, Military Hospital 103, from November 2024 to March 2025.

Exclusions included patients under 18 years of age, pregnant women; patients receiving continuous treatment with proton pump inhibitors or

H_2 receptor antagonists for at least 7 days in the 4 weeks prior to endoscopy; patients with irritable bowel syndrome; patients with depression, anxiety, or severe mental disorders; patients who abuse stimulants; and patients who did not consent to participate in the study.

2.2. Methods

- Research design: cross-sectional descriptive study.

- Diagnosis of functional dyspepsia according to ROME IV criteria [4], including: postprandial distress syndrome (PDS) and with or without epigastric pain syndrome (EPS) for at least 12 weeks in the previous 6 months; no evidence of organic damage, systemic disease, or metabolic disease that could explain the symptoms exhibited by the patient.

- Sampling method and sample size: convenient sampling; sample size calculated using the formula:

$$n = Z^2_{1-\alpha/2} p(1-p)/\Delta^2$$

Where: n is the minimum sample size; Z is the significance level (taking the 95% significance level, then $Z(1-\alpha/2) = 1.96$); p is the prevalence of functional dyspepsia (choose p = 11.5% according to the study by author Jones in the UK [4]); Δ is the desired error between the sample and the population (choose Δ = 0.05). Substituting the indices into the formula, we can calculate n ≈ 157 patients. In reality, the study selected a sample size of 160 patients.

- Standards applied in the study:

+ Diagnosis of functional dyspepsia: according to ROME IV criteria [5].

+ Assessment of the degree of functional dyspepsia using the LDQ scale [2].

+ Assessment of quality of life using SF-NDI [3].

- Research equipment: Olympus CV-170- gastro-enteroscope; Urease test.

- Research process:

+ Step 1: Interview patients and collect clinical data according to LDQ and SF-NDI questions.

+ Step 2: Perform gastroduodenoscopy according to the Ministry of Health's procedure [6]; classify lesion morphology according to the Sydney endoscopic classification system [7].

+ Step 3: Enter, analyze data and make comments.

- Research indicators:

+ Some clinical manifestations: heartburn, belching, epigastric pain, epigastric burning, early satiety, postprandial fullness, nausea, vomiting...

+ Gastric lesion morphology through endoscopy and H.pylori test results.

+ Assessment of functional dyspepsia level and patient quality of life.

- Ethics: This research has been approved by the Ethics Committee for Scientific Research of Military Hospital 103 (Decision No. 75/HĐĐĐ dated January 19, 2024). All patient information is confidential and used solely for research purposes.

- Data processing: using SPSS 22.0 software and medical statistical algorithms.

3. RESULTS

- Distribution of patients by age:

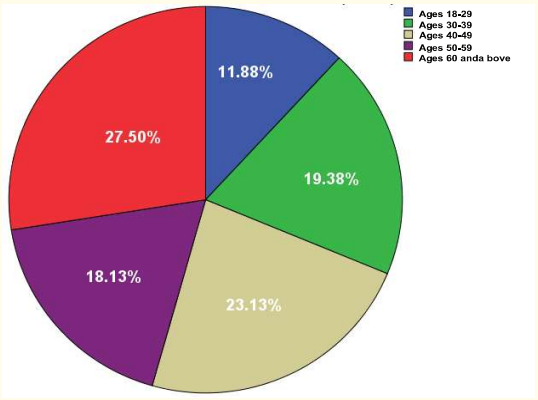

Figure 1. Distribution chart of patients by age.

The age range of patients is 18-82 years, with an average age of 47.69 ± 15.13 years. Patients over 60 years old account for the highest proportion (27.5%).

- Distribution of patients by gender:

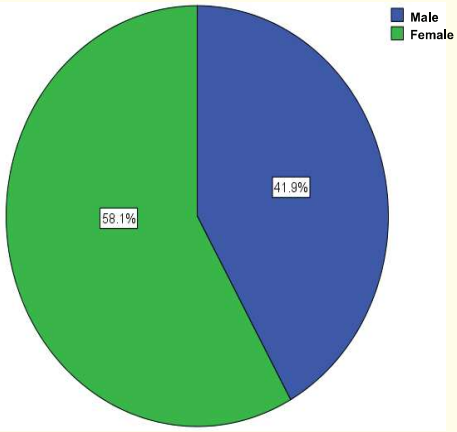

Figure 2. Distribution chart of patients by gender.

Female patients (58.1%) were more numerous than male patients (41.9%).

Table 1. Risk factors and frequency of subjective symptoms in the study patients

Criteria		No. of patients (n = 160)	Rate (%)
Risk factors	Smoking	35	21.9
	Drinking alcohol	50	31.3
Functional symptoms	Epigastric pain	137	85.6
	Epigastric burning	81	50.6
	Early satiety	88	55.0
	Postprandial fullness	117	73.1
	Heartburn	87	54.4
	Belching	101	63.1
	Nausea	82	51.2
	Vomiting	33	20.6

Risk factors observed in patients were smoking (21.9%) and alcohol drinking (31.3%). Common functional symptoms included epigastric pain (85.6%), and postprandial fullness (73.1%); epigastric burning, early satiety, heartburn, belching, and nausea were equally prevalent (ranging from 50.6-63.1%); vomiting was the least common symptom (20.6%).

Distribution of patients according to H. pylori infection rate:

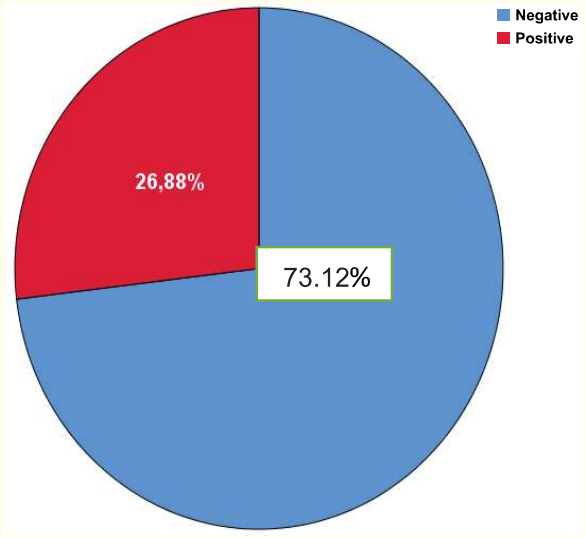

Figure 3. Distribution chart of the proportion of patients infected with H. pylori.

43 patients (26.9%) tested positive for H. pylori.

Table 2. Endoscopic gastric lesion morphology according to Sydney classification [7]

Morphology of gastric lesions through endoscopy.	No. of patients (n = 160)	Rate (%)
No lesions	4	2.5
Edematous and congestive inflammation	119	74.4
Flat and raised erosions	33	20.6
Atrophic and hypertrophic inflammation	0	0
Bile reflux inflammation	4	2.5
Hemorrhagic inflammation	0	0

The most common form of gastric lesions was edematous congestive inflammation (74.4%), followed by flat and raised erosions (20.6%), bile reflux and no lesions (both accounting for 2.5%), and atrophic, hypertrophic, and hemorrhagic forms were not observed.

Table 3. Assessment of functional dyspepsia severity based on the LDQ scale.

LDQ scale	No. of patients (n = 160)	Rate (%)
Very mild	19	11.8
Mild	26	16.3
Moderate	64	40.0
Severe	51	31.9
$\bar{X}$ ± SD	13.07 ± 7.36	
Lowest value	1	
Highest value	37	

The LDQ score ranged from 1-37 points, with an average of 13.07 ± 7.36 points. The percentage of patients rating functional dyspepsia as very mild was 11.8%, mild was 16.3%, moderate was 40.0%, and severe was 31.9%.

Table 4. Assessment of quality of life in patients according to the SF-NDI scale.

SF-NDI scale	No. of patients (n = 160)	Rate (%)
Minor impact	66	41.25
Significant impact	94	58.75
$\bar{X}$ ± SD	20.76 ± 2.72	
Lowest value	5	
Highest value	25	

SF-NDI scores ranged from 5-25 points, with an average of 20.76 ± 2.72 points. 41.25% of patients experienced minor impact on their quality of life, while 58.75% experienced significant impact.

4. DISCUSSION

The mean age of patients in this study was 47.69 ± 15.13 years, with patients aged ≥ 60 years accounting for the highest proportion (27.5%). This finding was higher than that reported by Do Thi Hong Khanh et al., whose study conducted at Bach Mai Hospital between October 2021 and June 2022 found a mean patient age of 42.9 ± 9.9 years [13]. The discrepancy may be explained by differences in selection criteria and sample size.

Female patients accounted for a higher proportion than male patients (58.1% vs 41.9%); consistent with research from the Icelandic National Registry (women suffer from functional dyspepsia more often than men) [10].

Regarding risk factors: 21.9% of patients had a smoking habit and 31.3% of patients drinking alcohol; lower than the research results of Do Thi Hong Khanh (smoking rate was 33.2%) [8]; equivalent to the research of Le Van Cuong and Nguyen Van Hung (2018) [12] at Hue Central Hospital (the rate of patients who drank alcohol was 33.1%). In general, the smoking and drinking rates in this study are equivalent to published domestic and international studies.

The common functional symptoms in patients with functional dyspepsia in this study included epigastric pain (85.6%), postprandial fullness (73.1%), belching (63.1%), early satiety (55.0%), heartburn (54.4%), nausea (51.2%), epigastric burning (50.6%), and vomiting (20.6%). A study by Mahadeva et al. [11] in Indonesia published in the World Journal of Gastroenterology showed that functional dyspepsia significantly affects health-related quality of life; in which, factors such as anxiety, depression, old age, female gender, and severity of symptoms were associated with the decline in patients' quality of life. The rate of functional symptoms in this study was higher than in some international studies, especially epigastric pain and postprandial fullness. This may be related to differences in culture, diet, and lifestyle habits of the study community.

Regarding endoscopic features, the most common lesions were edematous congestive inflammation (74.4%), followed by flat and raised erosions (20.6%). No cases of atrophic, hypertrophic, or hemorrhagic inflammation were recorded. A study by Li et al. [13] in China (2021) recorded a rate of approximately 60% of hyperemic inflammation, which is relatively consistent with our results. However, it should be noted that endoscopy only reflects the macroscopic morphology of the lesions and does not assess functional disorders - a core factor in functional dyspepsia.

The prevalence of *H. pylori* infection in our study was 26.9%, lower than rates reported in many developing countries, where infection prevalence may reach 50-80%, but comparable to the findings of Mahadeva et al. [12], who reported a prevalence of 23.3%.

Assessment using the LDQ showed that the majority of patients had Moderate or severe dyspepsia. Compared with the study by Bitwayiki et al. [13], our patients demonstrated a lower proportion of very mild and mild dyspepsia but a higher proportion of Moderate and severe cases. The study of Abdulrahman Alwhaibi (2020) [14] in Saudi Arabia also recorded a significant proportion of patients with Moderate and severe dyspepsia symptoms (41.1% of patients had mild dyspepsia symptoms, 27.6% had mild dyspepsia). Differences between studies may be related to the characteristics of the study populations and the methods used to classify symptom severity based on the LDQ scale.

Regarding the impact on quality of life, 41.3% of patients had an SF-NDI score < 15 points. This indicates that dyspepsia symptoms had little impact on patients' quality of life. 58.8% of patients had an SF-NDI score ≥ 15 points; lower than the results of Egbo's study (2024) [15] (92.6% of patients had an SF-NDI score ≥ 15 points). This difference may be related to the time of study and the socio-economic context, as Egbo's study was conducted in Nigeria - a region with generally lower quality of life than in Vietnam.

5. CONCLUSION

A study of 160 patients with functional dyspepsia examined and treated at the Gastroenterology Clinic, Military Hospital 103, from November 2024 to March 2025, showed that female patients (58.1%) were more numerous than male patients (41.9%). The average age of the patients was 47.69 ± 15.13 years. Common symptoms included epigastric pain (85.6%), postprandial fullness (73.1%), belching (63.1%), early satiety (55.0%), heartburn (54.4%), nausea (51.2%), and epigastric burning (50.6%).

Endoscopy mainly revealed edematous congestive inflammation (74.4%) and flat and raised erosions (20.6%). The rate of H. pylori infection was 26.9%. The majority of patients had moderate to severe dyspepsia (71.9%), and 58.8% of patients experienced significantly impaired quality of life.

These results indicate that functional dyspepsia presents with diverse clinical manifestations and significantly impacts quality of life, requiring comprehensive evaluation in clinical practice.

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