ZITA MEDICAL MANAGEMENT

www.hsmc.gr/en/pharmakeftiki-journal/

PHARMAKEFTIKI, 37, 2S, 2025 | 359-362 RESEARCH

https://doi.org/10.60988/p.v37i2S.228

Risk factors associated with peptic ulcer disease in patients attending two Iraqi teaching hospitals

Fakhria Jaber Muhaibes[1], Kareem Jebur Dhaidan[2], Mahdi Hamzah Al-Taee[1], Salim K. Hajwal[1], Zahraa M. Ayad[3], Abbas Abdul-Hussein Hassan[1], Muna Abdulwahab Khaleel[1], Alaa Hamza Abbas[4,*], Hayder Ridha-Salman[4]

[1]Department of Nursing, College of Nursing, Al-Mustaqbal University, Hillah, Iraq
[2]Department of Nursing, College of Nursing, University of Kerbala, Karbala, Iraq
[3]Department of Physiology, Biochemistry and Pharmacology, College of Veterinary Medicine, Al-Qasim Green University, Al-Qasim, Iraq
[4]Department of Pharmacology, College of Pharmacy, Al-Mustaqbal University, Hillah, Iraq

KEY WORDS:
risk factors; NSAIDs; smoking; peptic ulcer; patients

ARTICLE INFO:
Received: January 07, 2025
Revised: February 20, 2025
Accepted: February 21, 2025
Available online: October 10, 2025

*** CORRESPONDING AUTHOR:**
Alaa Hamza Abbas, Department of Pharmacology, College of Pharmacy, Al-Mustaqbal University, Hillah, Iraq; e-mail: alla1979200713@yahoo.com

ABSTRACT

Peptic ulcer disease (PUD) is a chronic condition of the digestive system that can lead to serious complications, increasing both morbidity and mortality and adversely affecting patients' quality of life. This study aimed to assess the sociodemographic characteristics of the sample and to evaluate patients' responses to known risk factors associated with PUD. A descriptive study was conducted in hospitals located in Al Hilla, Iraq. A purposive sample of 100 patients diagnosed with PUD was selected based on predefined inclusion criteria. Data were collected using a structured questionnaire and were analysed using descriptive statistics. Frequencies and percentages were used in order to categorize responses, while the mean and standard deviation were calculated in order to assess central tendency and variability. The findings revealed that patients reported high levels of exposure to several risk factors, including psychological stress, consumption of spicy foods, and intake of caffeinated beverages such as tea and coffee. The highest mean score was observed for the use of non-steroidal anti-inflammatory drugs, whereas the lowest scores were recorded for alcohol consumption, tobacco smoking, and rapid ingestion of food. In conclusion, the study highlights that dietary habits and lifestyle factors play a significant role in the development and exacerbation of PUD.

PHARMAKEFTIKI, 37, 2S, 2025 | 359-362

1. Introduction

Peptic ulcer disease (PUD) is among the most prevalent gastrointestinal disorders worldwide. It refers to an erosive lesion in the gastric or intestinal mucosa, typically affecting the upper gastrointestinal tract (including the oesophagus, stomach, and duodenum), and contributing significantly to global morbidity and mortality[1]. PUD can occur at any age and affects both males and females. It may result in work absenteeism and reduced productivity. The disease is particularly widespread in developing countries, where prevalence rates are estimated to reach 70%, compared to a maximum of 40% in developed nations[2,3]. Multiple risk factors contribute to the development of PUD, including the use of non-steroidal anti-inflammatory drugs (NSAIDs; e.g., diclofenac, aspirin, ibuprofen), tobacco smoking, and consumption of caffeinated beverages such as tea and coffee. Additional contributors include alcohol intake, psychological stress, socioeconomic status, and dietary habits[1]. Najm[4] has reported that over 90% of PUD patients were infected with *Helicobacter pylori*, alongside other contributing factors such as caffeinated beverages, stress, and pharmacological agents.

Despite advances in medical science, PUD remains a common condition among adults and older individuals, particularly those with chronic comorbidities. Enhancing public health knowledge and educating patients on preventive measures – especially regarding dietary modifications – may reduce the incidence and complications of PUD. This study was conducted in order to (i) identify the sociodemographic characteristics of patients diagnosed with PUD, (ii) determine the most common risk factors associated with the disease, and (iii) explore the relationship between dietary patterns and PUD.

2. Methodology

This study was conducted at the Marjan Hospital and the Al Hilla Teaching Hospital in Iraq. A non-probability purposive sample of 100 patients diagnosed with PUD was selected. Inclusion criteria comprised patients aged over 20 years, without complications of PUD, and willing to participate. Exclusion criteria included pregnancy, confirmed psychiatric conditions, age over 60 years, and serious illnesses such as renal failure and cancer.

Data collection involved structured questionnaires addressing sociodemographic variables (age, gender, education level, marital status) and risk factors. The questionnaire was developed and adapted from relevant literature and prior studies. Ethical approval was obtained from Al-Mustaqbal University's College of Nursing, with institutional permissions granted by the Al Hilla Teaching Hospital and the Marjan Hospital. The study adhered to the ethical principles of the Declaration of Helsinki. According to Document 1650, the local ethics committee reviewed and approved the study protocol, data instruments, and consent forms on November 14, 2024.

Each patient was interviewed individually in order to allow for the assessment of risk factors associated with PUD. To ensure content validity, the questionnaire was reviewed by 10 academic experts in the field. Their feedback was used in order to refine the instrument for clarity and applicability. Reliability was assessed using Cronbach's alpha coefficient, yielding a value of 0.80, indicating acceptable internal consistency. Finally, data were coded and analysed using the SPSS version 25.0 software for Windows.

3. Results and Discussion

Peptic ulcer disease is characterized by erosion of the mucosal lining of the upper digestive tract and presents as a chronic condition with diverse clinical manifestations. It has posed a significant global health challenge over the past two centuries[1,2].

Table 1 shows that the mean age of participants was 45.2 years, with most falling between 40 and 60 years. These findings align with those reported by Rajan[5]. In the present study, most patients reported sufficient income, consistent with findings from Egypt[6].

Regarding education, the majority of participants had only basic schooling, with just 10% holding a Bachelor of Science degree or diploma. Most participants resided in rural areas, likely reflecting the demographic composition of Al Hilla city. This finding contrasts with Shamseya *et al.*[7], who have reported that urban resi-

PHARMAKEFTIKI, 37, 2S, 2025 | 359-362

Table 1. Sociodemographic characteristics of the study's sample.

Variables	Categories	N	%
Age	20–30 years	5	5%
	31–40 years	22	22%
	41–50 years	36	36%
	51–60 years	37	37%
	mean ± SD: 45.2 ± 6.1 years		
Gender	male	40	40%
	female	60	60%
Marital status	single	4	4%
	married	88	88%
	divorced	8	8%
	widowed	0	0%
Economic status	sufficient	45	45%
	somewhat adequate	23	23%
	insufficient	32	32%
Educational level	cannot read and write	4	4%
	can read and write	28	28%
	primary school	28	28%
	secondary school	30	30%
	institute or college graduate	10	10%
Residence	rural	57	57%
	urban	43	43%
Occupation	employee	40	40%
	unemployed	28	28%
	housewife	30	30%
	retired	2	2%
Family history of peptic ulcer	yes	30	30%
	no	70	70%

dents had better disease-related knowledge.

Notably, 70% of participants had no family history of PUD, corroborating findings from other research[5]. Only 10% reported hypertension, and most had no chronic illnesses, contrary to findings by a previous study[5] in which the chronic disease prevalence was higher.

In terms of lifestyle and dietary factors, most participants did not associate alcohol consumption, smoking, or rapid eating with PUD. The majority were non-smokers, consistent with findings from West Bengal[8], which have reported a low incidence of PUD among smokers. Shamseya *et al.*[7] have noted that PUD affects both smokers and non-smokers. The low prevalence of smoking and alcohol use in the present study may be attributed to the predominance of female participants and cultural norms in Muslim-majority countries, where such behaviours are more common among males[3]. Social, religious, and community factors may further discourage these habits among women in Arab societies.

Conversely, high mean scores were observed for tea and coffee consumption and psychological stress. The highest mean score was recorded for NSAID use (2.93). This may reflect cultural practices in Iraq, where frequent tea consumption is common and analgesics are often taken without medical supervision. These findings are consistent with a previous study[9] that has identified stress and NSAID use as key risk factors for PUD. Additional contributors include dietary habits,

PHARMAKEFTIKI, 37, 2S, 2025 | 359-362

spicy foods, caffeine, and alcohol[9].

4. Conclusion

This study has identified several factors associated with PUD, including female predominance, age range between 20 and 60 years, adequate economic status, and absence of chronic disease or family history. High response rates were observed for stress, NSAID use, and consumption of spicy foods. Conversely, alcohol and smoking were associated with the lowest mean scores.

Acknowledgements

The authors gratefully acknowledge the nursing staff at the Al Hilla Teaching Hospital for their valuable contributions to this study. Appreciation is also extended to Al-Mustaqbal University for supporting the research and providing ethical approval.

Conflicts of interest

None exist.

ORCIDs

0000-0002-1269-2302 (F.J. Muhaibes); 0009-0009-1257-9455 (K.J. Dhaidan); 0009-0005-3266-5693 (M.H. Al-Taee); 0000-0002-9793-2247 (S.K. Hajwal); 0000-0003-0611-3084 (Z.M. Ayad); 0009-0002-3708-7368 (A.A.H. Hassan); 0009-0002-0864-4655 (M.A. Khaleel); 0000-0002-1382-8291 (A.H. Abbas); 0000-0003-1594-4883 (H. Ridha-Salman)

References

1. Li J., Jin J., Wang X., Huang F., Sun K., Li M., *et al.* Emerging trends and hotspots in peptic ulcer from 2008 to 2023: a bibliometric analysis. *Medicine (Baltimore)* 103(36), e39557, 2024. DOI: 10.1097/MD.0000000000039557
2. Amandeep K., Robin S., Ramica S., Sunil K. Peptic ulcer: a review on etiology and pathogenesis. *Int. Res. J. Pharm.* 3(6), 34-38, 2012.
3. Malfertheiner P., Chan F.K., McColl K.E. Peptic ulcer disease. *Lancet* 374(9699), 1449–1461, 2009. DOI: 10.1016/S0140-6736(09)60938-7
4. Najm W.I. Peptic ulcer disease. *Prim. Care* 38(3), 383–394, vii, 2011. DOI: 10.1016/j.pop.2011.05.001
5. Rajan J.K. Assessment of knowledge regarding prevention of peptic ulcer among adolescents in selected college at Shimla, Himachal Pradesh, India. *Med. Leg. Update* 19(2), 313–316, 2019. DOI: 10.37506/mlu.v19i2.794
6. Shokry Abd Allah E., El Sayed El Badawy R., Ramadan Abdel-Aziz H. Knowledge, practices, and quality of life of elderly patients with peptic ulcer disease at Zagazig university hospitals. *Egypt. J. Health Care* 12(1), 1380–1399, 2021. DOI: 10.21608/ejhc.2021.199137
7. Shamseya A.M., Shamseya M.M., Salem M.A., Ahmed A.S., Abdelfatah D.A. Assessment of some health-related practices and knowledge among a group of Egyptian patients with peptic ulcer disease. *J. Med. Sci. Clin. Res.* 3(11), 8186–8192, 2015. DOI: 10.18535/jmscr/v3i11.12
8. Hammer A.M., Morris N.L., Earley Z.M., Choudhry M.A. The first line of defense: the effects of alcohol on post-burn intestinal barrier, immune cells, and microbiome. *Alcohol Res.* 37(2), 209–222, 2015.
9. Lynch K.E., Parke E.C., O'Malley M.A. How causal are microbiomes? A comparison with the *Helicobacter pylori* explanation of ulcers. *Biol. Philos.* 34, 62, 2019. DOI: 10.1007/s10539-019-9702-2

HOW TO CITE:
Muhaibes F.J., Dhaidan K.J., Al-Taee M.H., Hajwal S.K., Ayad Z.M., Hassan A.A.H., Khaleel M.A., Abbas A.H., Ridha-Salman H. Risk factors associated with peptic ulcer disease in patients attending two Iraqi teaching hospitals. *Pharmakeftiki* 37(2s), 359-362, 2025. https://doi.org/10.60988/p.v37i2S.228