

Original article:

Proportion of Peptic Ulcer Patients Based on Esophagogastroduodenoscopy (EGD) Examination at Jakarta Haji Hospital 2015-2018

Femmy N. Akbar¹, Francisca A. Tjakradidjaja², Hari Hendarto¹, Sayid Ridho³, Nursyahidah⁴, Lathifa A. Rahma⁵

Abstract

Objectives: The morbidity and mortality rate of peptic ulcer disease (PUD) is quite high. For example proportion of PUD in China was 17.2%. There is a lack of epidemiological data available for this disease in Indonesia. This study aims to determine the proportion of PUD in Haji Hospital Jakarta and to describe the risk factors of age, sex, and patient history of NSAIDs medication. **Materials and Methods:** This was a cross sectional study. Samples were patients who undergo esophagogastroduodenoscopy (EGD) examinations at the Haji Hospital Jakarta from 2015 until 2018. Samples who met the inclusion dan exclusion criteria were selected randomly as needed. Data of chief complaints, diagnosis, age, sex, and history of NSAIDs medication were taken from the medical record. **Result and Discussions:** 112 samples were selected in this study. Major chief complaint was dyspepsia (42.9%). The proportion of PUD was 16 (14.3%) and predominantly male (75%). Most of the samples with PUD were >46 years old (68.8%). History of NSAIDs medications were 81.3% and most commonly used was mefenamic acid (41.2%). There was no significant association between PUD with sex ($p > 0.005$), but there was a significant association between PUD and age ($p < 0.005$). Furthermore, older people more than 46 years were 11.5 times more likely to develop peptic ulceration than below 46 years ($PR = 11.556$). **Conclusion:** Elderly people should be more aware of the risk of getting PUD, especially those who had a history of NSAIDs medication.

Keywords: Peptic Ulcer, Age, Sex, History NSAIDs Medication.

*International Journal of Human and Health Sciences Vol. 05 No. 01 January'21 Page : 27-30
DOI: <http://dx.doi.org/10.31344/ijhhs.v5i1.228>*

Introduction:

Peptic ulcer disease (PUD) is defined as breaks into submucosal depth or inner lining of the stomach and/or duodenum more than 5 mm. Esophagogastroduodenoscopy (EGD) is a gold standar to diagnose peptic ulcer.¹ The most common symptom found is dyspepsia. Dyspepsia has a close relationship with PUD, whereas in previous studies half of patients with

dyspepsia were subjected to EGD examination, subsequently it was found that those patients were indicated to have inflammation in the mucosa and submucosa gaster or duodenum.² The symptom of dyspepsia are blunt abdominal pain, nausea, vomiting, or bloating.

Prevalence of peptic ulcer is quite high. This disease has affected at least 5-10% of the world's population. In the United States, peptic ulcers

1. Department of Internal Medicine Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta, Indonesia
2. Department of Clinical Nutrition Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta, Indonesia
3. Haji Hospital Jakarta, Indonesia
4. Department of Pharmacology Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta, Indonesia
5. Medical Student Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta, Indonesia

Correspondence to: Dr. Femmy Nurul Akbar , SpPD-KGEH, Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta Mobile:+628161822556, Jl. Ir. H. Juanda 95 Tangerang 15412 Indonesia, Email: femmy.nurul@uinjkt.ac.id

are found in about 4.5 million people per year. Study in China showed that the prevalence of peptic ulcer cases was 17.2% of 1,022 subjects. In Indonesia, Gastroenterology Subdivision of an Educational Hospital in Makassar found a prevalence of 14% for duodenal ulcer and 5% for both duodenal ulcer and gastric ulcer. The most commonly affected age was between 45-65 years with increasing prevalence with age and 2:1 ratio between men and women.^{4,6-8} Barazandeh et al. showed that the prevalence of peptic ulcer disease was most prevalent above 40 years old. According to sc publications from Harvard Medical School, the male population is found to be higher risk of developing a peptic ulcer. Although the relationship between age and sex in peptic ulcer cases cannot be clearly explained, the large percentage makes these two risk factors require special attention.⁹⁻¹¹ Many studies showed that the effect of long-term use of NSAIDs is a major cause of peptic ulcer infections other than *H. pylori*. Kang, et al., a history of NSAID use was found in 154 of 438 subjects with peptic ulcer patients. NSAID is one of the most commonly prescribed drugs for the management of pain, fever, and inflammation such as rheumatoid arthritis, osteoarthritis, and ischemic cerebrovascular disorders. On the other hand, the availability of over-the-counter NSAID as an analgesic also increases the consumption of these drugs by the public and contributed increasing morbidity of peptic ulcer disease.^{3,12-14} The fact that the prevalence of peptic ulcer disease is still quite high, especially in developing countries, is a strong reason for the need for special attention to this disease.

Materials and Methods:

This study was a descriptive-categorical, with a cross-sectional approach. Samples were patients who undergo EGD examinations at Haji Hospital Jakarta from January 2015 to April 2018.

Inclusion criteria were patients who undergo endoscopic procedures at Jakarta Haji Hospital from January 2015 to February 2018. Exclusion criteria were patients under 17 years old, patients who have died, and patients with incomplete data. A total of 112 out of 1,169 samples who met the inclusion and exclusion criteria were selected randomly.

Data on diagnosis, age, sex, and history of NSAIDs medication were taken from the medical records,

then analyzed, and reported as a result of this study. Statistical analysis was performed using SPSS 25 for Windows version. Categorical variables were described as frequency (percentage). Categorical variables were compared between two groups using the Chi-square test.

Limitations and problems of this study are some incomplete examination and data especially history of treatment. Study can only know the history of treatment that has been undertaken on medical records so that the possibility of NSAID therapy obtained from hospitals as well as those purchased by patients themselves without a doctor's prescription cannot be differentiate.

Results:

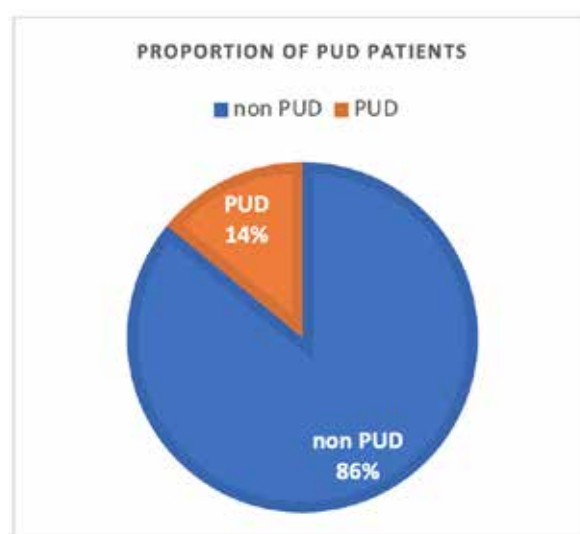
Proportion of peptic ulcer disease was 14% with predominantly male 75% and 68.8 % were 46 years and older. Major chief complaint was dyspepsia (42,9%).

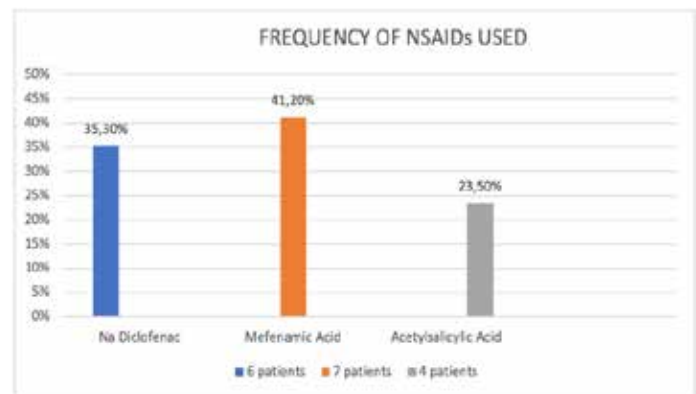
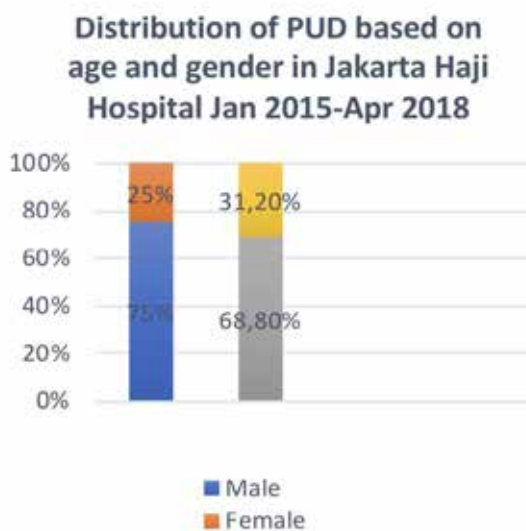
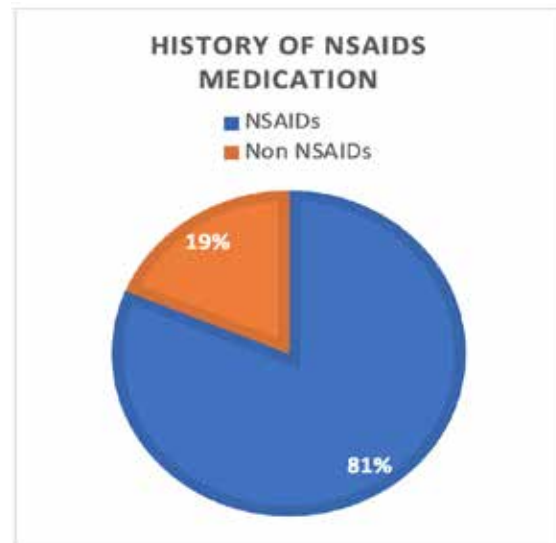
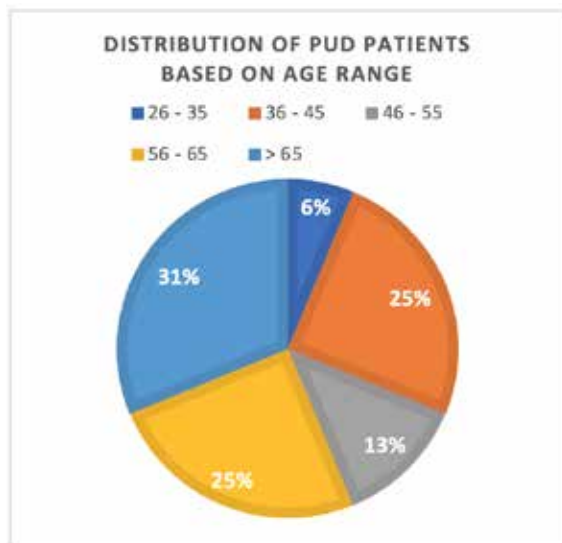
From patients were diagnosed with PUD, 81.3% had a history of NSAIDs medication. The most commonly used was mefenamic acid (41%)

Discussion and Conclusion:

There was no significant association between PUD and sex ($p > 0.005$), but there was a significant association between PUD and age ($p < 0.005$). Furthermore, older people (46 years and over) are 11.5 times more to develop peptic ulceration than younger people ($PR = 11.556$).

The proportion of peptic ulcer disease is quite high and generally more common in males with the majority of 46 years old or older. The history of NSAIDs drug used was 81.3% with mefenamic acid as the most commonly used drug. There was an association between PUD and age.





Elderly people should be more aware of the risk of getting PUD, especially those who had a history of NSAIDs medication.

Ethical Approval:

This study proposal was received approval

From the Ethics Committee Faculty of Medicine Universitas Islam Negeri Syarif Hidayatullah Jakarta

Conflict of interest: None declared **Acknowledgement:**

We acknowledge and thank all people who dedicated their time and participated in this study.

Author's Contributions:

Data gathering and idea owner of this study: FNA, FAT, LAR

Data gathering: FNA, FAT, LAR, SR,

Writing and submitting manuscript: FNA, LAR, NUR, HH, SR

Editing and approval of final draft : FNA, LAR, FAT, NUR, HH, SR

References:

1. Valle JD. Peptic Ulcer Disease and Related Disorders. In: Kasper DL, Fauci AS, Hauser SL, Longo DL, Jameson JL, Loscalzo J, ed Harrison's Principle of Internal Medicine. 19th ed. New York: McGraw-Hill Education, 2015: 1911-32.
2. Shiban, Sumaia AN. Dyspepsia among Endoscopy Patients in Two Major Hospitals in Jordan: Correlation with Psychological and Lifestyle Disorders. International Journal of Human and Health Sciences 2018;2 (2) :78-86.
3. Roy S. Clinical Study of Peptic Ulcer Disease. Asian Journal of Biomedical and Pharmaceutical Sciences 2016;6(53):41-3.
4. Akil HA. Tukak Duodenum. In: Setiati S, Alwi I, Sudoyo AW, Simadibrata M, Setiyohadi B, Syam AF, ed. Buku Ajar Ilmu Penyakit Dalam. 6th ed. Jakarta: Interna Publishing; 2014: 1792-7.
5. Lauret ME, Rodriguez-Pelaez M, Perez I, Rodrigo L. Peptic Ulcer Disease. J Gastro Hepato Dis 2015;1(1):105-12.
1. Anand BS, Katz J. Peptic Ulcer Disease. Medscape 2017 [Accessed 7 March 2018]. Available at: <https://emedicine.medscape.com/article/181753>
2. Aro P, Storskrubb T, Ronkainen J, Bolling-Sternevald E, Engstrand L, Vieth M, et al. Peptic ulcer disease in a general adult population: the Kalixanda study: a random population-based study. Am J Epidemiol 2006;163(11):1025-34.
3. Li Z, Zou D, Ma X, Chen J, Shi X, Gong Y, et al. Epidemiology of peptic ulcer disease: endoscopic results of the systemic investigation of gastrointestinal disease in China. Am J Gastroenterol 2010;105(12):2570-7.
4. Barazandeh F, Yazdanbod A, Pourfarzi F, Sepanlou SG, Derakhshan MH, Malekzadeh R. Epidemiology of Peptic Ulcer Disease: Endoscopic Results of a Systematic Investigation in Iran. Middle East J Dig Dis 2012;4(2):90-.
5. Harvard Health Publishing. Peptic Ulcer. Harvard Medical School 2014 [Accessed 29 July 2018]. Available at: <https://www.health.harvard.edu/digestive-health/peptic-ulcer-overview>
6. Velani Y, Galani P. Prevalence of Peptic Ulcer Disease among the Patients with Abdominal Pain Attending the Department of Surgery in Gujarat Adani Institute of Medical Science, Bhuj, India. Indian Journal of Applied Research 2015;5(12):409-11.
7. Sinha M, Gautam L, Shukla PK, Kaur P, Sharma S, Singh TP. Current Perspectives in NSAID-Induced Gastropathy. Mediators of Inflammation 2013:1-11.
8. Kang JW, Lee JS, Bae KM. Correlation between Peptic Ulcer Disease and Risk Factors. Korean J Fam Pract 2016;6(5):479-83.
9. Matsui H, Shimokawa O, Kaneko T, Nagano Y, Rai K, Hyodo I. The pathophysiology of non-steroidal anti-inflammatory drug (NSAID)-induced mucosal injuries in stomach and small intestine. J Clin Biochem Nutr 2011;48(2):107-11.