International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2020): 7.803

Endoscopy Profile Patients with Gastrointestinal Symptoms in Wangaya Regional General Hospital, Bali, Indonesia, during January 2021 - May 2021 Period

Kadek Sinta Dwi Saraswati[1], I Komang Septian Trisna Jaya[2], I Made Suma Wirawan[3]

[1, 2, 3]Department of Internal Medicine, Wangaya Regional Hospital, Denpasar, Bali, Indonesia
Corresponding Author Email: *sintadwi.saraswati[at]gmail.com*

Abstract: ***Background:*** ***Endoscopy is one of the most commonly performed procedure to evaluate gastrointestinal symptoms. Upper gastrointestinal endoscopy or esophago-gastro-duodenoscopy (EGD) and lower gastrointestinal endoscopy or colonoscopy can provide valuable information with less complication. Endoscopy profile has been reported in many hospitals. The aim of this study was to determine the endoscopy profile of patients with gastrointestinal symptoms in Wangaya regional general hospital, Bali, Indonesia, during period of January 2021- May 2021.*** ***Methods:*** ***A descriptive cross-sectional study and bivariate analysis was conducted among the medical record of 105 patients who underwent endoscopy in Wangaya Regional General Hospital due to gastrointestinal symptoms during period of January 2021- May 2021 using total sampling technique. Variable assessed in this study included patient's socio-demographic, type of endoscopy, and the outcome of the endoscopy procedure. Data were analyzed using SPSS version 21 for windows.*** ***Results:*** ***This study conducted 105 patientswith61 (58%) patients were male, while 44 (42%) were female. Patient aged 50-59 years as many as 24 patients (22.9%) as the most frequent age group in our study and epigastric pain in 61 (58.1%) patients become the most common symptoms that appear as the main complaint of patients. Gastritis-gastric ulcers is the most common endoscopic findings in our study. No significant correlation between gender and the incidence of gastritis-gastric ulcer (p = 0.473). The incidence of gastritis-gastric ulcers is more common in the age group <60 years than elderly group (48.5% vs 13.3%) and statistically, the risk of developing gastritis-gastric ulcer increased significantly by 2.7 times in the group of patients aged <60 years compared to the elderly group (p = 0.02, OR (95% CI) = 2.7 (1.1 – 6.4)).*** ***Conclusion:*** ***About 105 patients have undergone upper gastrointestinal endoscopy during January-May 2021 period. This study shown greater number of male patients compared to female and the patients were most frequently between 40-59 years old. Gastritis-gastric ulcers especially gastritis superficialis antrum was the most frequently found diagnosis in this study.***

Keywords: Profile, Endoscopy, Gastrointestinal, Wangaya Hospital

1. Introduction

Gastrointestinal symptoms or commonly known as dyspepsia is chronic or recurrent pain or discomfort centred in upper abdomen. Dyspepsia is derived from Greek words 'dys' and 'pepse' and literally means "difficult digestion". The Rome III criteria defined symptoms of dyspepsia as one or more of the following symptoms: postprandial fullness, early satiety, epigastric pain or burning and no evidence of structural disease that is likely to explain the symptoms [Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis].[1]Patients with dyspepsia can have alarm symptoms include weight loss, anaemia, vomiting, haematemesis, melena and dysphasia.Younger patients unresponsive to empirical treatment,patients over 55 years old with new onset dyspepsia, and those who have alarm symptoms require prompt investigation to exclude serious gastrointestinal disease.[1]Upper gastrointestinal (UGI) bleed is one of the common medical emergencies that have an incidence of 50 to 150 cases per 100 000 population and hospital mortality of approximately 7% to 10% even in developed countries. Non-variceal UGI bleeding is the most common cause where peptic ulcer disease accounts for 50% to 70%.[2]

Gastrointestinal endoscopy is one of the techniques in gastroenterology-hepatology to see directly the situation in the digestive tract using an instrument called an endoscope.Endoscopic examination of the upper gastrointestinal tract is called Esophago-gastro-duodenoscopy (EGD) to evaluate the condition of the mucosa in the upper gastrointestinal tract and its surroundings. Lower endoscopic examination is called colonoscopy is used to evaluate lumen of lower gastrointestinal tract such as sigmoid colon, descending colon, transverse colon, ascending colon, cecum, and ileum. Endoscopy remains an essentialstool to the clinical management of patient with gastrointestinal disorders. Standard endoscopy uses white light to provide images of gastrointestinal tract mucosa.[3] Endoscope has been evolved over time from rigid endoscopes with limited capabilities to more flexible endoscopes with better imaging capabilities, and have special features for performing therapeutic interventions and have different designs to allow examination of specific areas from the digestive tract.[4]

Before performing an endoscopic examination, it is necessary to pay attention to the actions of pre-endoscopy, both in the upper and lower gastrointestinal endoscopy examinations. It is also necessary to notify the patient and family of the indications and contraindications of the endoscopy examination, so that the patient and family can know for sure what will be done during the examination. It should also be noted that informed consent (document of

medical action) before performing an endoscopic examination.

Therefore, we would like to determine the profile of upper and lower endoscopy in our hospital. The profile included patient's distributions according to age, sex, indications and endoscopic diagnosis.

2. Methods

This research is a descriptive study using a cross sectional design to determine the profile of endoscopy patients with gastrointestinal symptoms which have indication to underwent endoscopy (upper & lower) based on patient's socio-demography (age and gender), type of endoscopy that used (EGD or Coloscopy), and results of endoscopy that found in Wangaya Regional General Hospital from January 2021 to May 2021 period.

This research was carried out in Endoscopy Unit, Wangaya Regional General Hospital, with consideration of available data from January 2021 to May 2021. Data in this research is secondary data obtained from patient's register at Endoscopy Unit, Wangaya Regional General Hospital.

The populations target is all inpatient or outpatientwhich have indication of endoscopy examination in Wangaya Regional General Hospital. While the population's affordable in this research are all patients with gastrointestinal symptoms who underwent endoscopy in Wangaya Regional General Hospital from January 2021 until May 2021. Samples in this study are all patients who underwent endoscopy in Wangaya Regional General Hospital from January 2021 until May 2021. The number of samples in this study was 105 samples, using total sampling's method, obtained from results of a preliminary survey that conducted in the Endoscopic Unit, Wangaya Regional General Hospital, on 2021. Data that has been collected were analyzed using a computer with SPSS version 21 for Windows software.

3. Results

The result of our study, there were 105 patients who underwent endoscopic examination in Wangaya Regional General Hospital during period of January - May 2021. Among them, 61 (58%) patients were male, while 44 (42%) were female (**Figure 1**).

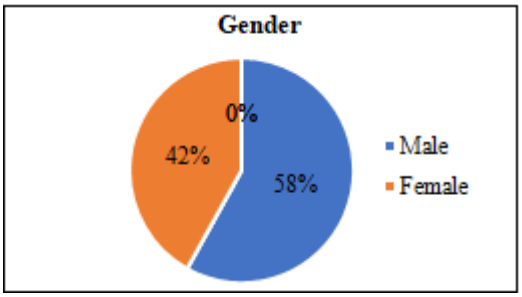

Figure 1: Gender distribution of patients who underwent endoscopic examination

Of the 105 patients, obtained in the age group of 20-29 years as many as 11 patient (10.5%); age group 30-39 years as many as 17 patients (16.2%); age group 40-49 years as many as 22 patients (21%); age group 50-59 years as many as 24 patients (22.9%); age group 60-69 years as many as 14 patients (13.3%); age group 70-79 years as many as 14 patients (13.3%); and the age group 80-89 years as many as 3 patients (2.9%) (**Figure 2**).

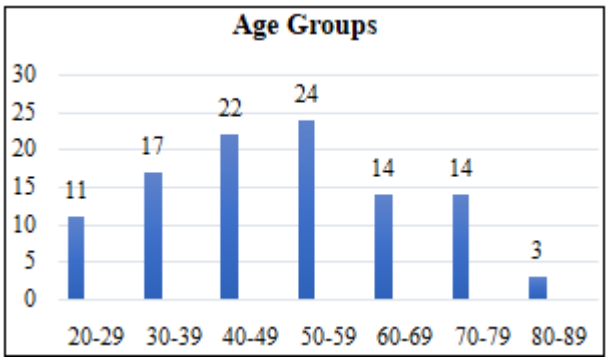

Figure 2: Distribution of age groups of endoscopic patients who underwent endoscopic examination

The most common symptoms that appear as the main complaint of patients who perform endoscopy at Wangaya Regional Hospital was epigastric pain in 61 (58.1%) patients, then haematochezia in 14 (13.3%) patients, followed by constipation in the same number of 14 (13.3%) patients, then hematemesis in 8 (7.6%) patients, chronic diarrhea as many as 5 (4.8%) patients, and the last one was melena in 3 (2.9%) patients (**Table 1**).

Table 1: Distribution of the main symptoms of patients who underwent endoscopic examination

Main symptom	Frequency (n)	%
Epigastric pain	61	58.1
Haematochezia	14	13.3
Melena	3	2.9
Hematemesis	8	7.6
Chronic diarrhea	5	4.8
Constipation	14	13.3

Figure 3 Show that of the 105 patients who underwent endoscopic examination at the Wangaya Regional Hospital, found that 73 (70%) patients underwent endoscopic EGD, and 32 (30%) patients underwent colonoscopy.

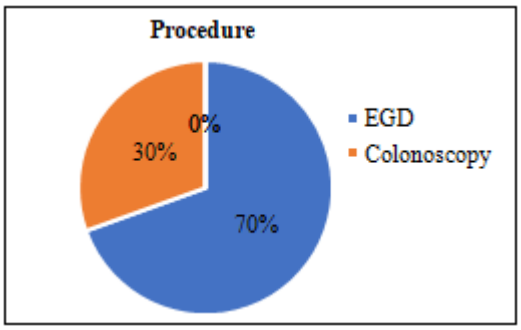

Figure 3: Distribution of patients who underwent endoscopic examination by type of procedure

From the results of endoscopy examination, we found the incidence of suspected carcinoma colorectal in 8 patients

(7.6%), non-specific colitis in 6 patients (5.7.%), duodenum ulcers in 1 patient (1%), varices oesophagus in 3 patients (2.9%), internal haemorrhoid in 8 patients (7.6%), proctosigmoiditis in 3 patients (2.9%), esophagitis in 1 patient (1%), and most of them are gastric disorders with more than 50% incidence, including erosive gastritis in 4 patients (3.8%), gastric ulcers in 8 patients (7.6%), gastric outlet obstruction in 2 patients (1.9%), pangastritis superficialis in 22 patients (21%), also gastritis superficialis antrum in 28 patients (26.7%). Then the rest, in 11 patients (10.5%) no significant abnormalities were found from the results of endoscopic examination (**Table 2**).

Table 2: The results of patients who underwent endoscopic examination

Result	Frequency	%
Susp carcinoma colorectal	8	7.6
Non-specific colitis	6	5.7
Duodenum ulcers	1	1
Varices oesophagus	3	2.9
Gastritis superficialis antrum	28	26.7
Pangastritis superficialis	22	21
Internal haemorrhoid	8	7.6
Gastric outlet obstructions	2	1.9
Gastric ulcers	8	7.6
Proctosigmoiditis	3	2.9
Erosive gastritis	4	3.8
Esophagitis	1	1
No abnormalities	11	10.5

In addition to conducting a descriptive analysis, we also conducted a bivariate analysis between gender and age on the incidence of gastric disorders including gastritis and gastric ulcers. We looked for whether there was a correlation between gender and the incidence of gastritis-gastric ulcers, also divided the age group of the sample into <60 years; and ≥60 years, then looked for a correlation with the incidence of gastritis-gastric ulcers.

The result was there is no significant correlation between gender and the incidence of gastritis-gastric ulcer (p = 0.473). We found that male or female have almost the same risk of developing gastritis-gastric ulcers. However, we found different results on the age variable. The incidence of gastritis-gastric ulcers is more common in the age group <60 years then elderly group (48.5% vs 13.3%) and statistically, the risk of developing gastritis-gastric ulcer increased significantly by 2.7 times in the group of patients aged <60 years compared to the elderly group ($p = 0.02$, OR (95% CI) = 2.7 (1.1 – 6.4)) (**Table 3**).

Table 3: The result of bivariate analysis between gender and age on the incidence of gastric disorders (gastritis-gastric ulcers)

Variables	Total (%)	Gastritis-Gastric ulcers (%)	Non – gastric disorders (%)	p value; OR (95% CI)
Gender				
Male	61 (58)	36 (34.3)	25 (23.8)	0.47; 0.7
Female	44 (42)	29 (27.6)	15 (14.3)	(0.3 – 1.7)
Age Group				
< 60 years old	74 (70.5)	51 (48.5)	23 (22)	0.02; 2.7
≥ 60 years old	31 (29.5)	14 (13.3)	17 (16.2)	(1.1 – 6.4)

4. Discussion

This study was conducted 105 patients and it was a retrospective study. Our hospital is a secondary referral central hospital that takes care of complicated and referred cases from primary health centre institutions. In our study, 61 (58%) patients were male, while 44 (42%) were female and we found that there is no correlation between gender and the incidence of gastritis-gastric ulcers. Female and malehas the same risk of developing gastric ulcers. On the other hand, some study showed that male sex was a risk factor for asymptomatic peptic ulcers disease, but not for symptomatic peptic ulcers disease. Previous studies revealed that female sex is a common predisposing factor for symptoms of functional gastrointestinal disorders. Because men are less sensitive to GI symptoms, ulcer-related symptoms may be less obvious in men than in women.[5-7]

Gastritis-gastric ulcers was found to be the most common endoscopic findings in our study. Most patient in our study were at 50-59 years old (22,9%). Statistically, the risk of developing gastritis-gastric ulcers in our study increased significantly in group of patients aged <60 years compared to elderly group (>60years). This study results are similar to the study conducted by Lumbatobing et al who found that among dyspepsia patient with dysfunctional dyspepsia, (51.88%) were at 40-59 years age.[8]Some study showing that peptic ulcers disease has higher prevalence among the patients aged <60 years old. Sarda et al reported predominance of pelvic ulcers disease in the age group of 20-30 years (30.7%).[9]Our study hasdifferent result from Shamseya et al, which showed there's no statistically significant correlation between age and incidence of peptic ulcers.[10]H. pylori and the use of NSAIDs are the most common risk factors for developing peptic ulcers disease, and also the genetic, stress and comorbidity increase the risk of peptic ulcers disease occurrence, as also the work stress in the medical field play significant role as risk for developing peptic ulcers disease so successful eradication and prevention of the risk factors should be conducted to prevent the presence of peptic ulcers disease and is complication.[11]

5. Conclusion

Upper gastrointestinal endoscopy in our hospital has revealed the most frequent endoscopic findings was gastritis-gastric ulcers especially gastritis superficialis antrum followed by normal endoscopic. There are numerous risk factors of peptic ulcers such sex, age, genetic, stress, use of NSAID, and H. pylori infection. Limitations of this study include small sample size and the retrospective descriptive method. Further studies with larger sample size and prospective method would help us to verify or refute the findings in this study.

6. Conflict of Interest

None

7. Author Contribution

All of authors are equally contributed to the study from the conceptual framework, data gathering, data analysis, until interpreting the results of study through publication.

References

[1] Desai S B, Mahanta B N. A study of clinico-endoscopic profile of patient presenting with dyspepsia. Clinical Epidemiology and Global Health 6. 2018. 34–35
[2] Bhattarai S. Clinical Profile and Endoscopic Findings in Patients with Upper Gastrointestinal Bleed Attending a Tertiary Care Hospital: A Descriptive Cross-sectional Study. J Nepal Med Assoc.2020. 58(226):409-15
[3] Kwan V. Advancesingastrointestinalendoscopy. Internal medicine journal. 2012.
[4] Kaminang GA, Waleleng BJ, Polii EB. ProfilEndoskopi Gastrointestinal di RSUP Prof. Dr. R. D. Kandou Manado periodeJanuari 2016 – Agustus 2016. Jurnal E-Clinic (ECl).2016. 4(2):1-7.
[5] Lee SP, Sung IK, Kim JH, Lee SY, Park HS, Shim CS. The effect of emotional stress and depression on the prevalence of digestive diseases. J NeurogastroenterolMotil. 2015. 21:273-282.
[6] Ford AC, Bercik P, Morgan DG, Bolino C, Pintos-Sanchez MI, Moayyedi P. Characteristics of functional bowel disorder patients: a cross-sectional survey using the Rome III criteria. Aliment PharmacolTher. 2014. 39:312-321.
[7] Oshima T, Miwa H. Epidemiology of functional gastrointestinal disorders in Japan and in the world. J Neurogastroenterol Motil.2015. 21:320- 329.
[8] Lumbatobing et al. The Profile of Upper Gastrointestinal Endoscopyin Deli Serdang Hospital. The Indonesian Journal of Gastroenterology, Hepatology, and Digestive Endoscopy. 2011. Volume 12, Number 1
[9] Serda et al. Study of Incidence of Peptic Ulcer Perforation in Young Adults: A Hospital Based Study. International Archieve of Biomedical and Clinical Research. 2018. 4;1
[10] Shamseya et al. Assessment of Some Health-Related Practices and Knowledge among a Group of Egyptian Patients with Peptic Ulcer Disease. Journal of medical science and clinical research. 2015. 3;1
[11] Asali et al. Risk factors leading to peptic ulcer disease: systematic review in literature. International Journal of Community Medicine and Public Health. 018. 5(10):4617