

# The Profile of Upper Gastrointestinal Endoscopy in Deli Serdang Hospital

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## ABSTRACT

**Background:** Upper gastrointestinal endoscopy profile has been reported by many hospitals; however, there has never been from Deli Serdang hospital, North Sumatera. The aim of study was to determine the profile of upper endoscopy at Deli Serdang hospital.

**Method:** The study was conducting retrospectively 453 patients during the period of December 2006–December 2008 at the Endoscopy Unit Department of Internal Medicine Deli Serdang hospital. Data were obtained from medical records including the age, sex, race, indications, and endoscopic diagnosis. All data were reported descriptively.

**Results:** Out of 453 patients who underwent upper gastrointestinal endoscopy, 241 (53.20%) patients were male. The mean age was  $66.3 \pm 15.6$ . Most patients (51.88%) were between 40-59 years of age. Regarding the ethnicity, there were 30.91% Batakese patients, 21.85% Javanese, 18.98% Karonese, 14.79% Malays, and 13.47% patients of other ethnicities. Dyspepsia was the mostly found indication, which was found in 75.94% patients. It was followed by hematemesis/melena in 15.01% patients and other indications in 6.84% patients. About 33.11% patients had normal upper gastrointestinal diagnosis; while gastritis was found in 26.93% patients, erosive gastritis in 18.98% patients, gastric/duodenal ulcer in 8.83% and esophageal varices in 5.74% patients.

**Conclusion:** About 453 patients have undergone upper gastrointestinal endoscopy during 2 years period. This study shown greater number of male patients compared to female and the patients were most frequently between 40-59 years old. Normal upper gastrointestinal diagnosis was the most frequently found in this study.

**Keywords:** upper gastrointestinal endoscopy, profile, indications, endoscopic diagnosis

## ABSTRAK

**Latar belakang:** Profil endoskopi saluran cerna bagian atas (SCBA) telah dilaporkan di beberapa rumah sakit, tetapi belum pernah dilaporkan dari rumah sakit Deli Serdang. Tujuan penelitian ini adalah untuk melaporkan profil endoskopi saluran cerna bagian atas di rumah sakit Deli Serdang.

**Metode:** Penelitian dilakukan secara retrospektif periode Desember 2006–Desember 2008 di Unit Endoskopi Departemen Penyakit Dalam, rumah sakit Deli Serdang pada 453 pasien. Data dikumpulkan dari rekam medik lalu dicatat umur, jenis kelamin, suku, indikasi dan diagnosis endoskopi.

**Hasil:** Sebanyak 453 pasien yang dilakukan endoskopi SCBA, 241 (53,20%) laki-laki 241 (53,20%). Usia rata-rata pasien yaitu  $66,3 \pm 15,6$  tahun dengan usia terbanyak yaitu 40-59 tahun (51,8%). Berdasarkan jenis suku, terdapat 30,91% pasien mempunyai suku Batak, suku Jawa 21,85%, suku Karo 18,98%, suku Melayu 14,79%, dan suku lainnya 13,47%. Indikasi endoskopi SCBA tersering yaitu dispepsia 75,94%, diikuti hematemesis/melena 15,01%, dan indikasi lainnya 6,84%. Terdapat 33,11% mempunyai hasil diagnosis endoskopi normal, gastritis 26,93%, gastritis erosif 18,98%, dan varises esofagus 5,74%.

**Kesimpulan:** Dari 453 pasien yang dilakukan endoskopi SCBA selama 2 tahun, laki-laki lebih banyak dari perempuan, dan tersering pada usia 40-59 tahun. Diagnosis endoskopi normal paling banyak dijumpai.

**Kata kunci:** endoskopi saluran cerna bagian atas, profil, indikasi, diagnosis endoskopi

## INTRODUCTION

Upper gastrointestinal endoscopy or esophagogastro-duodenoscopy (EGD) is one of the most commonly performed endoscopic procedures. Properly performed, it provides valuable information in patients with upper gastrointestinal (GI) conditions.<sup>1,2</sup> Many patients have experienced benefits greatly from endoscopy.<sup>3</sup> Unfortunately, however, in some cases it may be an unhelpful procedure, and can result in severe complications.<sup>4</sup> Dyspepsia is an extremely common disorder in an otherwise healthy population. It has been estimated that as many as 25-40% of adults will experience dyspepsia in a given year.<sup>3,4</sup> Although most individuals who experience dyspepsia symptoms do not seek medical attention, approximately 25% do seek treatment, making the condition responsible for 4-5% of all primary care physician visits.<sup>5,6,7</sup> The investigations and management of patients with digestive problem at peripheral hospital was needed several years ago. In Deli Serdang hospital, North Sumatera, never had reported endoscopic investigations. Routine EGD can be useful, especially in patients with active bleeding.

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

## METHOD

We performed a retrospective descriptive study in adults aged 15-78 years old who underwent upper gastrointestinal endoscopy screening for the first time between December 2006 and December 2008 at the Endoscopy Unit Department of Internal Medicine, Deli Serdang hospital. This was a retrospective analysis of an existing data set from medical record. Written informed consent was obtained from the participating subjects. The data reviewed were age, sex, race, indications and endoscopic diagnosis. All data were reported descriptively.

## RESULTS

There were 453 patients underwent upper gastrointestinal endoscopy at Deli Serdang hospital during years 2006-2008. Among them, 241 (53.20%) were male and 212 (46.80%) were female. We found that most patients were between 40-59 years of age (51.88%) with mean age of  $66.3 \pm 15.6$  years. We evaluated the data according to Indonesian ethnicity and we found that the most frequent ethnic was Bataknese covering 140 (30.91%) patients. The most common indications for performing endoscopy in all patients were dyspepsia, which included 344 (75.94%) patients.

## DISCUSSION

A significant aim in the global health care, including the field of gastroenterology, is to have greater attempt in improving patient's compliance and optimizing medical care. To achieve such goal, obstacles must first be identified. We chose to focus on the issue of providing profile of upper gastrointestinal endoscopy in patients at peripheral hospital both for the hospitalized patients and patients who had their outpatient treatment. This study was conducted in 453 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 center institutions. The mean age of this study was  $66.3 \pm 15.6$  years, with the most patients (51.88%) were at 40-59 years age. This study results are similar to the study conducted by Utia et al who found that among dyspepsia patients with dysfunctional dyspepsia, most patients (52.4%) were at 41-60 years of age.<sup>8</sup> According to Indonesia ethnicity, we observed that the highest prevalence was in Bataknese followed by Javanese and Karonese. Such results are more likely to be expected since the Bataknese representing the majority of ethnics in Deli Serdang region. This study revealed the four most frequent indications for upper GI endoscopy, i.e. dyspepsia, hematemesis/melena, dysphagia/odynophagia, weight loss/anemia/chest pain. Dyspepsia may be indicative of organic diseases such as acid-mediated conditions or motility disorders in up to 76% of patients.<sup>9</sup>

In this study, the distribution of endoscopic diagnosis of population was 33.11% normal endoscopic; followed by 26.93% gastritis and 18.98% erosive gastritis, 8.83% gastric and duodenal ulcer, 5.74% esophageal varices, 3.31% gastropathy, 2.21% esophagitis, and only 0.88% cancer. Daldiyono et al, reported from Cipto Mangunkusumo hospital, Jakarta, the following data, i.e. 28% normal, 29% gastritis, 15.67% erosive gastritis, 7.67% duodenitis, 5.83% esophagitis, 3.5% duodenal ulcer, 2.2% gastric and duodenal ulcer.<sup>10</sup> Sundar et al, reported that among 11,145 patients with uncomplicated dyspepsia, they found 228 (2%) patients with upper gastrointestinal malignancy.<sup>9</sup> Van Kerkhoven et al, reported that they found 42% normal upper gastrointestinal endoscopy findings in 420 patients with dyspepsia.<sup>11</sup>

Adam et al, found that 19% endoscopic findings were reported normal. Esophageal varices bleeding is the most common etiological diagnosis (44%); followed by peptic ulcer (19.7%).<sup>12</sup> This study result regarding the upper gastrointestinal malignancy was lower than reported by Yusuf et al, who found that among 2,116 patients underwent endoscopy due to dyspepsia, there were 110 (5.20%) patients with diagnosis of cancer.<sup>13</sup>

**Table 1. Characteristic of patient**

Characteristic	n (%)
Age (years)	
mean ± SD	66.3 ± 15.6
20-39	94 (2.75)
40-59	235 (51.88)
> 60	124 (27.37)
Sex	
Male	241 (53.20)
Female	212 (46.80)
Ethnic	
Batakese	140 (30.91)
Javanese	99 (21.85)
Karonese	86 (18.98)
Malays	67 (14.79)
Etc	61 (13.47)
Indication	
Dyspepsia	344 (75.94)
Hematemesis/melena	68 (15.01)
Dysphagia/odynophagia	10 (2.21)
Weight loss/anemia/chest pain/etc	31 (6.84)
Endoscopic diagnosis	
Normal	150 (33.11)
Gastritis	122 (26.93)
Erosive gastritis	86 (18.98)
Gastric/duodenal ulcer	40 (8.83)
Esophageal varices	26 (5.74)
Gastropathy	15 (3.31)
Esophagitis	10 (2.21)
Gastric cancer	4 (0.88)

**Table 2. Diagnosis of endoscopy related to sex and age**

	Sex		Age (years)		
	Male	Female	20-39	40-59	> 60
Normal	79 (17.44)	71 (15.67)	29 (6.40)	101 (22.30)	20 (4.42)
Gastritis	66 (14.57)	56 (12.36)	31 (6.84)	55 (12.14)	36 (7.95)
Erosive gastritis	42 (9.27)	46 (10.15)	19 (4.19)	39 (8.61)	28 (6.18)
Gastric/duodenal ulcer	22 (4.86)	18 (3.97)	7 (1.55)	18 (3.97)	15 (3.31)
Esophageal varices	15 (3.31)	9 (1.99)	3 (0.66)	13 (2.87)	10 (2.21)
Gastropathy	9 (1.99)	6 (1.32)	1 (0.22)	5 (1.10)	9 (1.99)
Esophagitis	6 (1.32)	4 (0.88)	4 (0.88)	2 (0.44)	4 (0.88)
Gastric cancer	2 (0.44)	2 (0.44)	0 (0.00)	2 (0.44)	2 (0.44)

## CONCLUSION

Upper gastrointestinal endoscopy in our hospital has revealed the four most frequent indications for endoscopy including dyspepsia, hematemesis/melena, dysphagia/odynophagia, and weight loss/anemia/chest pain. However, the most diagnosis was normal. 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.

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