

## Epidemiology and Etiology Of Bleeding Gastrointestinal Tract at Cut Meutia General Hospital North Aceh 2019-2021

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**Abstract.** Gastrointestinal tract is a condition in which bleeding occurs in the oesophagus, stomach, duodenum, jejunum, ileum, and rectum. This is caused by many things, such as in the upper gastrointestinal tract due to gastric ulcers, various esophageal ruptures, Mallory Weiss syndrome, esophagitis, and tumors. While the lower gastrointestinal tract can be caused by Crohn's disease, ulcerative colitis, diverticulitis, intestinal polyps, anal fissures, hemorrhoids and tumors. The description of age characteristics at the time of gastrointestinal bleeding at Cut Meutia General Hospital, North Aceh Regency in 2019- 2021 was mostly at the age of 20 - 34 years, which found 17 people (28.7%). Description of the characteristics by gender in the female gender recorded 42 people (65.5%). The number of patients who underwent endoscopy at Cut Meutia General Hospital, North Aceh Regency in 2019-2021 presented 73 people of whom 59 people underwent colonoscopy (77.5%) and 14 people who underwent gastroscopy (22.5%).

**Keywords:** gastrointestinal tract, endoscopy.

### Introduction

Gastrointestinal bleeding is one of the emergency cases in the field of gastroenterology which is currently still a problem in the health sector. Over the past four decades there has been no change in incidence despite advances in management or therapy. The increased incidence in some countries is related to the use of aspirin and non-steroidal anti-inflammatory drugs (NSAIDs). In addition, the prevalence of gastrointestinal bleeding varies greatly based on age, gender and several other factors. The final outcome in the form of rebleeding and death is the result of inadequate management<sup>1</sup>.

In the United States the incidence ranges from 50-150 per 100,000 population per year. The mortality rate varies between 4-14% depending on the patient's condition and appropriate treatment. Patients with complications or without complications in the United States the average length of hospitalization was 4.4 and 2.7 days with treatment costs of 5632 US dollars and 3402 US dollars, respectively. Generally 80% of cases will stop on their own. 10% of cases require interventional procedures to control bleeding.<sup>2</sup> In Indonesia, the

incidence rate based on data from the Gastrointestinal Endoscopy Center (PESC) at Cipto Mangunkusumo Hospital, there was an increase of 26.2% for endoscopic services from 2010 as many as 1,825 patients to 2013. 2011 as many as 2,303 patients, both receiving services for diagnosis and even therapeutics in the Gastroenterology section.<sup>3</sup> In Aceh itself, Based on research conducted at Cut Meutia General Hospital North Aceh in 2017 – 2018 a total of 90 patients underwent endoscopy. Based on the data collected, there are more female patients than male patients.<sup>1</sup>

The most common cause of upper gastrointestinal bleeding (SCBA) in Indonesia is variceal bleeding due to liver cirrhosis (65%), while in European and American countries it is non- variceal bleeding due to peptic ulcer (60%)<sup>4</sup>. Other rare causes include Malory Weiss tears, erosive duodenitis, Dieulafoy's ulcer (a type of vascular malformation), neoplasms, aortoenteric fistula, GAVE (gastric antral vascular ectasia) and gastropathy prolapse. The cause of lower GI bleeding is usually local irritation due to fissures or hemorrhoids; polyps; infections such as Shigella, Salmonella, Inflammation such as colitis and Crohn's disease<sup>5</sup>. Various forms of blood, such as large or broken blood clots, the discharge can be mixed with feces or out alone outside defecation. Bacterial enteritis, cow's milk allergy, intussusception, swallowing maternal blood, and lymphonodular hyperplasia are common causes in neonates<sup>6</sup>. Lesions on the gastrointestinal mucosa are common causes in infants and children. Intussusception is the most common cause in this age group (80% of cases are found under 2 years of age)<sup>7</sup>.

### **Material and methods**

This research uses a descriptive method with a cross sectional approach. The location of this research was carried out at MR BLUD Cut Meutia General Hospital, North Aceh Regency. This study was conducted in November 2021. The population in this study were all patients diagnosed with gastrointestinal bleeding at the Cut Meutia Hospital, North Aceh Regency, which were recorded from 2019 to 2021, totaling 73 patients. The sampling technique of this study was carried out with a total sampling technique.

### **Results**

This research was conducted with a sample of 73 people. The samples in this study were all those who had gastrointestinal bleeding and had undergone endoscopy at the Cut Meutia General Hospital, North Aceh Regency in 2019-2021 who met the inclusion and exclusion criteria that had been determined. Research results can be seen in the following table :



Table 1 Characteristics of the study sample by age

Age	n	%
<20 years	7	9.3
20-34 years old	17	28.7
35-44 years old	8	12.5
45-54 years old	13	15.5
55-64 years old	15	18.0
65-74 years old	12	14.0
75-84 years old	1	2.0
>84 years old	0	0
Amount	73	100.0

Source: Secondary data, 2021

Table 1 shows that the age of patients is more in the age of 20-34 years, which is 17 people (28.7%).

Table 2 Characteristics of the research sample by gender

Gender	n	%
Man	31	35.5
Woman	42	65.5
Jumlah	41	100,0

Source: Secondary data, 2021

The table above shows that more patients with gender There were 42 women (65.5%).

Table 3 Total Endoscopy Gastrointestinal bleeding in patients with Gastrointestinal bleeding

Total	n	%
Colonoscopy	59	77.5
Gastroscopy	14	22.5
Jumlah	73	100,0

Source: Secondary data, 2021

The table above shows that the total endoscopic gastrointestinal bleeding is more than Most performed is Colonoscopy, totaling 59 patients (77.5%).

## Discussion

From the results of research conducted at Cut Meutia General Hospital in 2019 - 2021. There were as many as 73 patients who underwent endoscopy aged 20-34 years as many as 17 people (28.7%) then followed by patients aged 55-64 years as many as 15 people (18.0%) and the least is patients aged 75-84 years as many as 1 person (2.0%). These results are in line with research conducted by Prof. R. D Kandou General Hospital Manado in 2013-2015. The majority of this study was in patients aged 21-34 years as many as 39 patients (40.3%) followed by patients aged 56-65 years with 28 patients (29.7%) and the lowest is patients aged 7-12 years, namely as many as 3 patients (3.5%). Age factor greatly affects gastrointestinal bleeding because it often occurs in adults and the risk increases at age > 60 years. Research in 2001-2005 with a retrospective study at Cipto Mangunkusumo Hospital on 837 patients who met the SCBA bleeding criteria showed the mean age of male patients was  $52.7 \pm 15.82$  years and the average age of female patients was  $54, 46 \pm 17.6.26$  Age 70 years is considered a risk factor because there is an increase in the frequency of NSAID use and the interaction of comorbid diseases that cause various complications.

Then from the results of research conducted at Cut Meutia General Hospital in 2019-2021 there were 42 patients (65.5%) female and 31 patients male (35.5%). Cases of upper and lower gastrointestinal bleeding are more common in men. Research in the United States shows that about 51.4% of those who experience gastrointestinal bleeding are male. Of the studies that have been carried out, the majority use an epidemiological approach and there are no studies that specifically explain the relationship between gastrointestinal bleeding and gender<sup>10,11</sup>.

Then from the results of research conducted at Cut Meutia General Hospital in 2019-2021 there were a total of 73 patients who underwent endoscopy (colonoscopy, gastroscopy) 59 patients who underwent colonoscopy and 14 patients who underwent gastroscopy. The results of this study are in line with research conducted from Sanglah Hospital in 2015. In this study, there were 105 patients who underwent endoscopy due to gastrointestinal bleeding<sup>8,9</sup>.

Colonoscopy is an examination procedure to detect sores, irritation, polyps or cancer in the large intestine and rectum, which is the lowermost part of the large intestine that connects to the anus<sup>12</sup>. This procedure is done by first giving an anesthetic to the patient. Colonoscopy is performed using a colonoscope, which is a flexible tube with a diameter of approximately 1.5 cm. This hose is equipped with a camera at the end. The camera

functions to send images to the monitor, so the doctor can see if there are abnormal conditions in the large intestine<sup>13</sup>.

Gastroscopy or esophagogastroduodenoscopy (ESD) is a procedure to examine the condition of the esophagus, stomach, and the first part of the duodenum<sup>14</sup>. Gastroscopy is performed using an endoscope, which is a special instrument in the form of a thin tube with a light and camera at the end. Gastroscopy is useful for determining the cause of the symptoms of indigestion that appear<sup>15</sup>. In addition, gastroscopy can also be used as a supporting procedure to treat certain conditions, such as bleeding in gastric ulcers and gastric inflammation, as well as removing polyps or small tumors<sup>16</sup>.

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