

ENDOSCOPIC FINDING OF UPPER GASTROINTESINAL BLEEDING AT DR SOETOMO HOSPITAL, SURABAYA

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ABSTRACT

Gastrointestinal (GI) bleeding is an extremely common clinical problem, resulting in significant morbidity, mortality, and cost. The overall incidence of upper GI bleeding is approximately 100 cases per 100,000 population and accounting for 1–2% of all hospital admissions. In the western, acid peptic disease (e.g., gastric and duodenal ulcers as well as gastritis) is the most common cause of upper GI bleeding, accounting for 50–75% of all cases, even among patients with chronic alcohol use, portal hypertension, and varices. At dr. Soetomo hospital- Surabaya, variceal bleeding is the most common cause of upper GI bleeding along decade 1990s. The initial assessment is important to define factors that have prognostic importance. The main factors predicting death include increasing age, co morbidity, and endoscopic findings. Mortality is extremely low in patients under 40 years old but thereafter increases steeply with advancing age. The objective of this study was to determine the source of upper gastrointestinal bleeding by performing endoscopic examination among patients with haematemesis and or melena at Dr. Soetomo Hospital Surabaya. This was a descriptive study which retrospectively based on the data all patients with haematemesis and or melena who performed esophago-gastro-duodenoscopic examination at dr. Soetomo hospital between 01 January 2006 to 30 December 2008. In year 2006, esophageal varices bleeding was the commonest cause of upper gastrointestinal bleeding (40.06%), followed by erosive gastritis (37.89%), peptic ulcer (5.28%), and malignancy (5.28%). In year 2007 the common cause of upper GI bleeding was similar with esophageal varices bleeding still the commonest cause (32.24%), followed by erosive gastritis (30.2%), peptic ulcer (13.88%), and malignancy (12.24%). The features of upper GI bleeding along 2008 revealed that erosive gastritis become the most common cause (42.66%), and followed by esophageal varices bleeding, peptic ulcer, and malignancy respectively 27.99%, 11.26%, and 3.41%. Percentage of patients with age over 50 years old were 54.94% in year 2006, 59.59% in year 2007 and 64.16% in year 2008. As conclusion, at Dr. Soetomo Hospital Surabaya, there was change of the most common cause upper gastrointestinal bleeding prior due to variceal esophagus in 2006 and 2007 became erosive gastritis predominantly in 2008.

Keywords: upper gastrointestinal bleeding, causes, endoscopy

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INTRODUCTION

Gastrointestinal (GI) bleeding is an extremely common clinical problem, resulting in significant morbidity, mortality, and cost. There are over 300,000 hospitalizations annually in the United states for GI bleeding (Cutler & Mendeloff 1981), accounting for 1–2% of all hospital admissions (Zimmerman & Curfman 1997). A conservative estimate of the overall annual cost of hospital admissions for GI bleeding is \$900 million (Quirk et al 1997), but the true overall cost, including outpatient endoscopic and radiologic investigations, clinic visits, and work days lost, far exceeds this figure.

The annual incidence of upper GI bleeding varies from 47 to 116 per 100 000 population and is higher in socio-economically deprived areas (Longstreth 1995; Rockall et al 1995). Although hospital mortality has not improved over 50 and remains at about 10%, older patients who have advanced cardiovascular, respiratory, or cerebrovascular disease that them at increased risk of death now comprise a much higher proportion of cases. Many patients bleeding is associated use of non-steroidal anti-inflammatory drugs, but there is evidence that prognosis is worse in patients who are taking these drugs than in those who are not.

All patients who develop acute gastrointestinal bleeding need urgent assessment. Almost all should be admitted

as an emergency to hospital. Only a small minority of young, fit patients who have self limiting bleeding can be managed as outpatients, but even those need urgent investigation. Patients who present with haematemesis tend to have more severe bleeding than those who present with melaena alone.

The initial assessment it is important to define factors that have prognostic importance. The main factors predicting death include increasing age, co morbidity, and endoscopic findings. Mortality is extremely low in patients under 40 years old but thereafter increases steeply with advancing age. Patients who have severe co morbidity—particularly renal insufficiency, hepatic failure, or disseminated malignancy—have a poor prognosis. Hospital admission may be precipitated by gastrointestinal bleeding in many of these patients, and death is often due to disease progression rather than to bleeding.

Patients who develop acute upper gastrointestinal hemorrhage after hospitalization for other serious illness have a much worse prognosis than those who are admitted because of bleeding, with a mortality of about 30%. Endoscopic findings of active, spurting haemorrhage; a non-bleeding blood vessel visible within an ulcer; and red spots on large varices are associated with risk of further bleeding. The absence of these endoscopic stigmata indicates little chance of rebleeding and early discharge from hospital.

In west countries, acid peptic disease (e.g., gastric and duodenal ulcers as well as gastritis) is the most common cause of upper GI bleeding, accounting for 50–75% of all cases (Van Dam & Brugge 1999), even among patients with chronic alcohol use, portal hypertension, and varices (Wilcox et al 1996). In Dr. Soetomo hospital – Surabaya in 1993, the most common cause upper GI bleeding in 1993 is variceal bleeding (76.9%) and followed by erosive gastritis (19.2%), and peptic ulcers (1%).

The aim of this study was to investigate the finding of esophago-gastro-duodenoscopy (EGD) in new patients with hematemesis and/or melena at Dr. Soetomo Hospital, Surabaya, during January 2006 until December 2008.

MATERIALS AND METHODS

All patients were male and female who admitted to Internal Ward Dr. Soetomo Hospital Surabaya (in period January 2006 – December 2008) with history hematemesis and/or melena. Esophago-gastro-duodenoscopy performed in Division of

Gastroenterology and Hepatology at day 1 – 5 after admission. Inclusion criteria were male and female, and eligible for criteria of hematemesis and/or melena, while exclusion criteria were sepsis, unstable haemodynamic, unconscious, obstruction of esophagus, and not cooperative

RESULTS

During period 1 January – 31 December 2006 there were 322 patients, 178 male (55.28%) and 144 female (44.72%), age 50.98 ± 13.58 years old, with percentage of patients with age over 50 years old were 54.97%. Endoscopic finding shown that causes of hematemesis and/or melena were: esophageal variceal bleeding in 129 patients (40.06%), erosive gastritis in 122 patients (37.89%), peptic ulcers in 17 patients (5.28%), malignancy in 17 patients (5.28%), and no abnormalities found in 37 patients (11.49%).

During period 1 January – 31 December 2007 there were 245 patients, 147 male (60%) and 98 female (40%), age 51.48 ± 14.64 years old, with percentage of patients with age over 50 years old were 59.59%. Endoscopic finding shown that causes of hematemesis and/or melena were: esophageal variceal bleeding in 79 patients (32.24%), erosive gastritis in 74 patients (30.2%), peptic ulcers in 34 patients (13.88%), malignancy in 30 patients (12.23%), and no abnormalities found in 28 patients (11.43%).

During period 1 January – 31 December 2008 there were 293 patients, 176 male (60.06%) and 117 female (39.93%), age 53.1 ± 13.9 years old, with percentage of patients with age over 50 years old were 64.16%. Endoscopic finding shown that causes of hematemesis and/or melena were: esophageal variceal bleeding in 82 patients (27.99%), erosive gastritis in 125 patients (42.66%), peptic ulcers in 33 patients (11.26%), malignancy in 10 patients (3.41%), and no abnormalities found in 43 patients (14.68%).

DISCUSSION

All patients who develop acute gastrointestinal bleeding need urgent assessment. Almost all should be admitted as an emergency to hospital. Only a small minority of young, fit patients who have self limiting bleeding can be managed as outpatients, but even those need urgent investigation. Patients who present with haematemesis tend to have more severe bleeding than those who present with melaena alone. At the initial assessment it is important to define factors that have prognostic importance. The main factors predicting death include

increasing age, comorbidity, and endoscopic findings. Mortality is extremely low in patients under 40 years old but thereafter increases steeply with advancing age. The elderly appear to be at particular risk, as the proportion of elderly patients who present with upper GI bleeding has steadily increased, with persons older than age 60 years accounting for 35–45% of all cases (Silverstein et al 1981a). Patients who have severe comorbidity—particularly renal insufficiency, hepatic failure, or disseminated malignancy—have a poor prognosis. Hospital admission may be precipitated by gastrointestinal bleeding in many of these patients, and death is often due to disease progression rather than to bleeding. In this study we found male patients more than female with percentage of patients older than 50 years were 54.97% in years 2006, 59.59% and 64.16% respectively for years 2007 and 2008. Patients who have upper GI bleeding must be promptly and accurately clinically assessed to provide a rational basis for key early decisions on their medical management. The medical history, physical examination, and initial laboratory values are important in assessing resuscitation requirements, triage, endoscopy timing, consultation requirements, and prognostication.

Esophago-gastro-duodenoscopy (EGD) is the prime diagnostic and therapeutic tool for UGIB. It is the procedure of choice. It accurately delineates the bleeding site and determines the specific cause, it provides a rational basis for triage of patients for routine hospital admission versus ICU admission, it helps assess the need for surgery, it provides valuable prognostic information, and it can be used to apply the recently greatly expanded armamentarium of endoscopic therapy. Therapeutic endoscopy generally produces hemostasis and prevents rebleeding (Adler et al 2004; Rolhauser & Fleischer et al 2002). The available therapies include injection therapy, such as injection of epinephrine; ablative therapy, such as electrocautery or argon plasma coagulation; and mechanical therapy, such as endoclips or banding. EGD rarely causes serious complications, such as gastrointestinal perforation, precipitation of bleeding, missed pathology, and anesthesia complications (Reiertsen et al 1987). The benefit of EGD has to be weighed against the risks in high-risk patients, such as those who have acute myocardial infarction (Lin et al 2006).

In the west countries, the commonest cause of upper gastrointestinal haemorrhage is peptic ulcer (Boonpongmanee et al 2004, Palmer 2007, Silverstein et al 1981b). A history of proved ulcer or ulcer-like dyspepsia is absent in about 20% of cases. In these patients consumption of aspirin or non-steroidal anti-inflammatory drugs is common. Infection with *Helicobacter pylori* is less prevalent in bleeding ulcers

than in uncomplicated ulcers. Severe ulcer bleeding is due to erosion of the artery by the ulcer, and the severity of bleeding depends on the size of the ulcer and the size of the arterial defect. Bleeding from a defect greater than 1 mm in diameter is unlikely to stop spontaneously and does not respond to endoscopic treatment. Large ulcers arising from the posterior part of the duodenal cap can erode the gastro duodenal artery and provoke brisk bleeding.

Bleeding from gastric erosions, oesophagitis, or vascular malformations usually stops spontaneously and is not usually life threatening. Mallory-Weiss tears are a consequence of retching, and most patients have a history of alcohol misuse, have features of other gastrointestinal disease such as peptic ulcer or gastroenteritis, or have non-gastrointestinal causes of vomiting. Bleeding usually stops spontaneously, although endoscopic haemostatic treatment is sometimes required.

Bleeding from upper gastrointestinal malignancy is not usually severe, and the prognosis is dictated by the stage of the disease. Patients with extensive upper gastrointestinal cancer have a dismal prognosis, but death is not usually a consequence of gastrointestinal haemorrhage but of disease progression.

In any patient with acute gastrointestinal bleeding liver disease should be considered because it requires specific management. Esophageal varices account for a small proportion of cases but have a disproportionate impact on medical resources. Bleeding is often severe, and other features of liver failure—such as fluid retention, hepatic encephalopathy, renal failure, and sepsis—often develop after the bleed. About a third of patients will die, and prognosis is related to the severity of the underlying liver disease rather than the size of variceal haemorrhage. Artoduodenal fistula must be considered in patients who develop profuse bleeding and have undergone aortic aneurysm surgery.

Based on EGD, patients in this study showed that in years 2006 and 2007 the commonest cause of hematemesis and/or melena was esophageal varices bleeding (40.06% and 32.24% respectively), but in years 2008 esophageal varices bleeding was in second place (27.99%) after eosive gastritis (42.66%). Bleeding from peptic ulcer was in third place in three years: 5.28% in year 2006, 13.88% in year 2007, and 11.26% in year 2008. Bleeding from malignancy of upper gastrointestinal found in 5.28% patients in year 2006, 12.24% patients in year 2007, and 3.41% patients in year 2008.

In 5–10% of cases of GI hemorrhage, no source is identified within the reach of standard bidirectional endoscopy (Lewis 2000). Among these patients, 27–40% will have lesions in the small bowel (Lahoti & Fukami 1999). Despite the development of diagnostic modalities, such as angiography, push enteroscopy, and sonde enteroscopy, approximately 50% of these lesions are not diagnosed prior to surgery (Lewis et al 1991a). Even the gold standard diagnostic modality, intraoperative enteroscopy, is diagnostic in only 55% (Lewis et al 1991b). In our study no source identified in 11.49% patients in 2006, 11.43% patients in 2007, and 14.68% patients in year 2008.

CONCLUSIONS

In Dr. Soetomo Hospital – Surabaya, there was change of the most common causes upper gastrointestinal bleeding prior due to variceal esophagus in 2006 and 2007 became erosive gastritis predominantly in 2008.

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