

Retrospective study of etiology of non variceal acute gastrointestinal bleeding in Eastern Himalayan region of india in Sikkim

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ABSTRACT

Upper gastrointestinal bleeding is one of the most commonly encountered emergencies in day-to-day practice. In the present retrospective study, the various causes of acute nonvariceal upper gastrointestinal bleeding (NVUGIB), its management modalities, and the final outcome of patients were studied. **Methods:** A retrospective study of etiology of upper gastrointestinal (UGI) bleeding for a period of 13 months, January 2015 to February 2016 in Department of Gastroenterology, Central Referral Hospital, Gangtok, was conducted. There were a total of 127 upper gastrointestinal bleeding patients, out of which 70 patients were excluded due to endoscopically proven variceal bleeding. Of the 57 patients, the various causes were determined by investigations and were treated accordingly. **Conclusion:** Hematemesis was the most common presentation and duodenal ulcers the most common etiology among the acute nonvariceal upper gastrointestinal bleed. The cause of bleeding was not identified in one patient. Majority (34 patients, 59.64%) of the patients was treated conservatively, some needed endoscopic interventions (23 patients, 40.35%) and there was no any mortality.

Keywords: DU, NVUGI, UGI

Introduction

Upper gastrointestinal (UGI) bleeding is one of the most common emergencies encountered in gastroenterology practice. It is estimated that 1–2% of all acute admissions are due to gastrointestinal (GI) bleeding.^[1] The incidence is more common with males than females and increasing with age.^[2] Patients with upper GI bleeding, clinical symptoms varies from hematemesis, malena, syncope, or asymptomatic iron-deficiency anemia. Sometimes hematochezia may be due to bleeding from an upper GI source.^[3] Our study is a retrospective study of etiology of nonvariceal UGI bleeding (NVUGIB) in eastern Himalayan region of India in Sikkim.

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Materials and Methods

We did retrospective study of etiology of the patients admitted in the Central Referral Hospital, Gangtok, with acute nonvariceal UGI bleed (NVUGIB). The study was carried out over a period of 13 months (between 15 January 2015 and 14 February 2016). The total number of patients in the study was 127, who were admitted under Gastroenterology Department. Out of 127, 70 patients had endoscopically proven variceal bleed and thus they were excluded. The remaining 57 cases were included in the present study. These patients' data were analyzed in detail regarding the history, dietary habits, alcohol intake, smoking, the amount of blood loss, and blood requirements. Out of 57 cases, 17 cases (65%) were encountered in the emergency room and the remaining 40 (35%) was seen in the outdoor. A total of two patients in emergency were in

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hypotension and they were managed with intravenous fluids, pack cell transfusion, vasopressors and proton pump inhibitors infusion, and once hemodynamically stable, they were subjected to endoscopic examination within 12 h and both had Forrest IIb duodenal ulcer and hemocclipping was done following sclerotherapy with injection adrenaline in dilution (1:10,000). Rest of the patients seen in the emergency and outdoor was hemodynamically stable.

UGI endoscopy was the chief investigative modality. However, a prothrombin time, ultrasonogram of abdomen was used to ascertain the liver status in all the patients and in one case, a computed tomography (CT) angiography was done to detect the source and site of bleeding but could not localize the site of bleed.

Results

Male to female sex ratio was 2.1:1. The mean age was 48.5 years. The commonest mode of clinical presentation was hematemesis, (32/57, 56.14%) followed by melena (17/57, 29.82%) and hematemesis with malena (8/57, 14.03%). All patients underwent UGI endoscopy within 6–24 h of admission and the cause was identified in 56 patients (98.24%) but in one patients (1.75%), the cause could not be determined despite an CT angiography and it was labelled as unknown cause. Duodenal ulcer was the most common lesion [Table 1] followed by gastric ulcer, gastric erosions, gastric ectasia, gastroesophageal reflux, Mallory–Weiss tear, gastric antral vascular ectasia, and gastric hyperplastic pedunculated polyps.

Majority of the patients were managed conservatively. Therapeutic endoscopy was needed in the form of sclerotherapy

with injection adrenaline (1:10000) alone in five patients, Injection adrenaline followed by hemocclipping in seven patients, injection adrenaline followed by argon plasma coagulation in nine patients, injection adrenaline followed by snare polypectomy in two patients. Rebleeding occurred in two patients after period of 24 and 48 h, respectively after initial bleed which was managed by hemocclipping. There was no mortality.

Discussion

Our hospital is a tertiary referral center, which receives all the referred cases from entire state of Sikkim. In our study, patients were in the age group from 16 to 72 years. The mean age of patients in our study was 48.5 years, little lower compared to western studies.^[4,5] This could be a reflection of the presence of higher older population in the west. The male patients were more in number than female patients as in western studies.^[6,7] Our study showed that duodenal ulcer was the most common endoscopic finding, similar to other studies in which peptic ulcer was more common after varices.^[8] Peptic ulcer is more common than variceal bleeding in western countries. Gastric ulcer is commoner than duodenal ulcer. Peptic ulcer is most commonly due to *Helicobacter pylori* infection. We did *H. pylori* test by doing rapid urease test in all patients. *H. pylori* was positive in 40.90% of duodenal ulcers, 18.18% of gastric ulcers, and 14.28% of erosive gastritis patients. The use of nonsteroidal anti-inflammatory drugs (NSAID) is a well-known risk factor associated with UGI bleed.^[9] In our study, 61.55% of the patients were taking NSAID. NSAID is an easily available drug taken by the patient and commonly causes erosive medical disease and peptic ulcer. Alcohol consumption has increased nowadays and it is a well-known risk factor for UGI bleeding. Smoking is a well-known associated factor with peptic ulcer. In our study, smoking was present among 4.54% and 18.18% in duodenal ulcers and gastric ulcers, respectively. In our study, the comorbid conditions most commonly associated were cardiac failure and renal failure [Table 2]. In our study, rebleeding was noted in 3.5%, a figure which is significantly low compared to that found in other previous studies.^[10] Early identification and aggressive treatment reduces the rebleeding. Hemoglobin level less than 7 g accounts for 3.5% of patients and they needed pack cell transfusion. All patients were treated with i.v. fluids and i.v. proton pump inhibitor (PPI). PPIs reduce the chances of rebleeding. The overall duration of hospital stay in our study was 5 days.

Table 1: Etiology of NVUGIB in our patients

Etiology	Male	Female	Total
Duodenal ulcer	15 (26.31%)	6 (10.52%)	21 (36.84%)
Gastric ulcer	7 (12.28%)	4 (7.01%)	11 (19.29%)
Erosive gastritis	2 (3.50%)	5 (8.77%)	7 (12.28%)
Gastric ectasia	5 (8.77%)	1 (1.75%)	6 (10.52%)
GERD	4 (7.01%)	1 (1.75%)	5 (8.77%)
Mallory-Weiss tear	3 (5.26%)	0 (0.00)	3 (5.26%)
Gastric antral Vascular ectasia	2 (3.50%)	0 (0.00)	2 (3.50%)
Gastric polyps	1 (1.75%)	1 (1.75%)	2 (3.50%)
Total numbers	39 (68.42%)	18 (31.57%)	57

Table 2: Percentage association of various factors with etiology of UGI bleed

Etiology	<i>Helicobacter pylori</i>	NSAID	Alcohol	Smoking	Chronic kidney disease
Duodenal ulcer	40.90%	9.09%	4.54%	4.54%	0%
Gastric ulcer	18.18%	18.18%	45.45%	18.18%	0%
GERD	20%	20%	40%	0%	0%
Erosive Gastritis	14.28%	14.28%	0%	28.57%	0%
Mallory-Weiss tear	0%	0%	33.33%	33.33%	0%
Gastric ectasia	0%	0%	16.66%	16.66%	33.33%
Gastric antral vascular ectasia	0%	0%	50%	50%	50%

Conclusion

Nonvariceal UGI bleeding is a common cause of hematemesis and malena. Duodenal ulcer was the most common etiological factor and it was more common in males than in females. There was strong association of *H. pylori* with duodenal ulcer. Test and treat strategy is needed for patients presenting with dyspepsia to prevent development of peptic ulcers and further prevent ulcer bleeding due to *H. pylori* infection in this eastern Himalayan region of India in Sikkim.

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Conflicts of interest

There are no conflicts of interest.

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