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Endoscopic findings of acute upper gastrointestinal bleeding in a tertiary care hospital

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ABSTRACT

Introductions: Acute upper gastrointestinal (UGI) bleeding is a common emergency. Prompt endoscopic diagnosis has an important role in overall management of patients. This study analyses the endoscopic findings of UGI bleeding in a tertiary care teaching hospital.

Methods: This was a cross sectional study of patients with haematemesis, melaena or both who had UGI endoscopy at Patan Hospital during Nov 2009 to Dec 2010. Patient demographics, site and nature of lesions and risk factors for bleeding were analyzed.

Results: There were 301 patients, male 203 (67%) female 98 (33%), age 15 to 92 years. Esophageal lesions were seen in 136 (45%), gastric 102 (34%), duodenal 46 (15%) and unidentified in 17 (7%). The lesions detected were esophageal varices in 120 (40%), duodenal ulcer in 32 (11%), Mallory-Weiss tear in 26 (9%), gastric ulcer in 18 (6%), gastric carcinoma in 17 (6%) and congestive pan-gastropathy in 16 (5%). History of drugs intake like aspirin, nonsteroidal anti-inflammatory drugs, warfarin and bisphosphonates was present in 32 (11%) patients.

Conclusions: Endoscopy was diagnostic in majority (94% of 301) UGI bleeding patients. Esophageal variceal bleeding was the common cause followed by peptic ulcer.

Keywords: endoscopy, gastroduodenoscopy, upper gastrointestinal, UGI bleeding

INTRODUCTIONS

For early diagnosis and definitive management of acute UGI bleeding, with haematemesis and/or melaena, endoscopy should be performed as soon as patient is haemodynamically stable with proper monitoring and supportive treatment.¹ Studies have reported peptic ulcer disease being the commonest cause of UGI bleeding, and duodenal ulcer bleed more common than gastric ulcer.²⁻⁹ More than 100,000 are estimated to bleed from peptic ulcer in USA each year.¹⁰ The use of drugs like aspirin, and nonsteroidal anti-inflammatory drugs (NSAIDs) are important risk factors of bleeding in peptic ulcer disease.¹¹⁻¹⁴ The aim of this study was to detect causes of UGI bleeding at endoscopy so that it could guide in its further management.

METHODS

This was a cross sectional study conducted from Nov 2009 to Dec 2010 at Patan Hospital. All patients with features of UGI bleeding like hematemesis and or melaena, who underwent gastroduodenoscopy at endoscopy unit of Patan Hospital were included.

The UGI endoscopy was performed after resuscitation, adequate fasting of 12 hours or after nasogastric lavage was clear in case urgency. Endoscopy was performed under 4% xylocaine viscous spray. Therapeutic endoscopic procedures were performed as necessary. Informed written consent was obtained from the patient or family members as per hospital policy.

Study variables included patient age, sex, presenting symptoms, cause of UGI bleed and risk factors. Descriptive analysis was performed.

RESULTS

There were 301 patients, male 203 (67%), female 98 (33%) had endoscopy for UGI bleed during one-year study period. The age ranged from 15 to 92 years, with maximum number of patients in age group of 30-40 years (Table 1).

Endoscopy revealed esophageal lesions in 136 (45%) and gastric in 102 (40%) and duodenal in 46 (15%). No lesions were detected in 19 (7%) cases of UGI bleeding (Table 2).

Table 1. Age distribution of patients with acute UGI bleeding (n=301)

Age (years)	Number Of Patients	Percentage
15-20	14	4.5
21-30	38	12.5
31-40	74	25.0
41-50	86	29.0
51-60	42	14.0
61-70	33	11.0
71-80	8	2.5
81-90	4	1.0
91-100	2	0.5
Total	301	100

Table 2. Endoscopic diagnosis in patients with UGI bleeding (n=301)

Type of lesions	No of Patient	Percentage
Esophageal lesions		
Esophageal Varices	120	40
Esophageal Erosions/Ulcer	7	2
Esophageal Cancer	9	3
Total	136	45
Gastric Lesions		
Mallory Weiss	26	9
Gastric Ulcer	18	6
Gastric Cancer	17	5.5
Gastropathy	16	5
Erosive Gastritis	11	3.5
Fundal Varices	6	2
Deulafoy's Lesion	4	1.5
Polyp	2	0.5
GAVE	2	0.5
Total	102	33
Duodenal lesions		
Duodenal Ulcer	32	11
Duodenal Erosions	11	3.5
Periampullary Growth	3	1
Total	46	16
Unidentified	19	7
Total	301	100

note: GAVE: Gastric Antral Vascular Ectasia)

Presenting symptoms were upper abdominal pain in 199 (66%) followed by haematemesis and melaena in 154 (51%), (Figure 1).

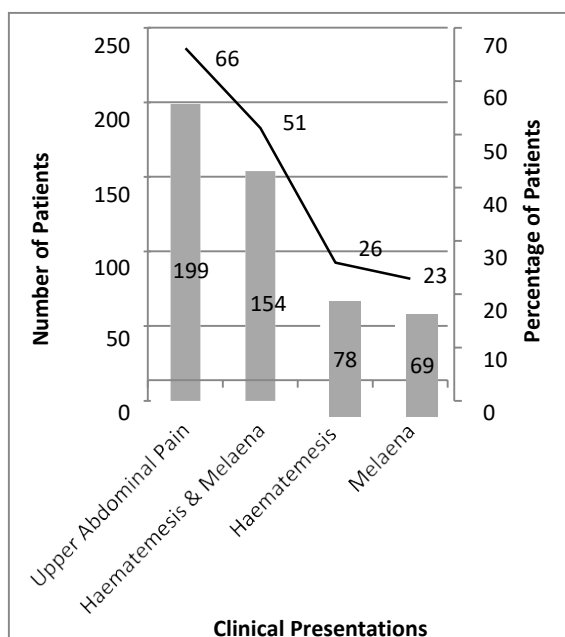


Figure 1. Presenting symptoms in patients with acute UGI bleeding (n=301)

Smoking, alcohol and drugs were possible predisposing factors of UGI bleeding in this series (Figure 2). There were no procedure related complications.

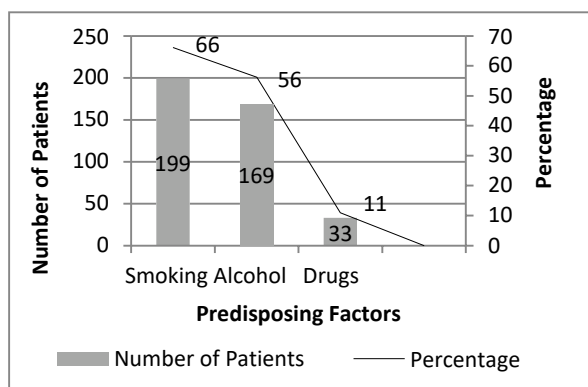


Figure 2. Predisposing factors related to UGI bleeding (n=301)

DISCUSSIONS

In this study of acute UGI bleeding, male (67% of 301) were twice more common than female (33%). Age group 30-50 years was common, comprising of

54%. Age less than 20 years (4.5%) and more than 70 years (4%) were less affected (Table 1) as described in other studies showing 21-40 years as common.¹⁷

In this series, 199 (66%) patients presented with upper abdominal pain or discomfort, 154 (51%) cases with both haematemesis and melaena, 78 (26%) with haematemesis alone and 69 (23%) with melaena alone which is consistent with other studies.¹⁸

The causes of acute UGI bleeding were identified in 274 (94% of 301) during UGI endoscopy. Seventeen (7%) cases did not reveal any positive finding which could be due to healed superficial lesions, swallowed haemoptysis or lesion present distally. Similar findings have been reported, showing peptic ulcer as commonest cause of UGI bleeding accounting 50%; and among peptic ulcer bleeding, duodenal ulcer twice as common as gastric ulcer.^{2-9,18}

Endoscopic findings revealed total esophageal lesions in 136 (45%) cases; most common varices in 120 (40%), followed by cancer in 9 (3%) and erosions in 7 (2%). In this series, esophageal variceal bleeding was commonest cause of acute UGI bleeding, commonly with history of alcohol consumption. The high number of such patients in our series could be because we get patients referred from other health facilities for further management. Mallory-Weiss tear was also common, probably due to use of alcohol causing vomiting and retching.

Among the possible predisposing factors of UGI bleeding, cigarette smoking was found in 199 (66%), followed by NSAID and alcohol (Figure 3). Similar findings have been reported, cigarette smoking in 49%, NSAID in 16% and alcohol consumption in 3% of cases. Alcohol consumption varies due to social and cultural restriction.¹⁹⁻²⁰

Some of the limitations of this retrospective reviews are we were not able to look into details of possible failure rate of UGI endoscopy and outcome of therapeutic procedures.

CONCLUSIONS

Emergency UGI endoscopy is safe and effective in diagnosis of UGI bleeding. Esophageal variceal bleeding was common followed by duodenal ulcer. Mallory-Weiss tear, congestive pan-gastropathy and gastric cancer were less common in this series.

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