



ENDOSCOPIC STUDY IN PATIENTS OF UPPER GASTROINTESTINAL BLEEDING IN TERTIARY CARE HOSPITAL OF ROHILKHAND REGION

General Medicine

Chaitanya gupta post graduate, Department of General Medicine

A.B. Mowar* Associate Professor Department of General Medicine *Corresponding Author

Abhishek Deepak DM Gastroenterology, SRMS-IMS Bareilly.

ABSTRACT

Background: Upper gastrointestinal bleeding (UGIB) is one of the commonest gastrointestinal emergencies encountered by clinicians. The aetiology of UGIB is variable in different geographical regions. Endoscopy has become the preferred method for diagnosis in patients with acute UGIB. The study is done to determine etiologic spectrum of UGIB in patients of upper gastrointestinal bleeding in a tertiary care hospital, SRMS IMS Bareilly.

Aim: To determine the frequency of various aetiologies of upper gastrointestinal bleeding.

Material and Method: This is a retrospective study carried out at SRMS-IMS hospital Bareilly over a 3 month period between March to May 2017 on 100 patients presenting with upper GI bleed are included in this study and their clinical presentation, aetiology of bleed, and outcome. Hemodynamically stable patients were kept empty stomach for at least 6-8 hrs. before procedure. A detailed history and physical examination was done before endoscopy.

Results: The mean of patients was 45.04 years with male: female ratio 2.33:1. 54% patients were first time bleeders. Complain of melaena present in majority of patients. Visualisation of active bleeding was achieved in 84% of cases when endoscopy was done in first 24 hrs. The most common cause was varices bleed 44% cases. Gastric ulcer was responsible in 24% cases. Duodenal ulcer caused in 14% of cases. Malignancy accounted for 11% bleeding. Other less common causes were Mallory- Weiss tear (3%), Oesophageal ulcer (2%), erosion (2%). Among 44% of variceal bleed 50% were alcoholic, 34.09% were of viral aetiology, and 13.63% were cryptogenic.

Conclusion: Oesophageal varices is the major cause of upper GI bleed in our set up reflecting high prevalence of alcoholic liver cirrhosis followed by HBV and HCV infections.

KEYWORDS

Introduction: Upper gastrointestinal bleeding (UGIB) is a gastrointestinal emergency that can result in significant morbidity, mortality, and use of health care resources.¹ UGIB is the bleeding from any part of the gastrointestinal tract proximal to the duodenojejunal junction or the ligament of Treitz. It may manifest as haematemesis or melaena or both. The incidence of upper gastrointestinal bleeding is more common compared to lower gastrointestinal bleeding. Despite improvements in diagnosis and treatment modalities over the last few decades, an in-hospital mortality rate of 5% is still a matter of concern.^{2,3} The etiology of UGIB may vary in different geographical regions. Epidemiological data are helpful in knowing the burden of the problem, the etiology, and the severity of the disease which ultimately helps in making strategies to combat morbidity and mortality. The advances in medical practice in recent decades have influenced the etiology and management of UGIB. There are only few recent epidemiological surveys regarding acute UGIB in India. In studies done in western population, peptic ulcer disease constitutes the most common cause of UGIB.^{3,4,5,6}

Endoscopy has become the preferred method for diagnosis in patients with acute upper GI bleeding. This method is informative in most patients, correctly identifying the site and source of bleeding in 90% of cases.⁷ Few discoveries in medicine have contributed more to the practice of gastroenterology than the development of diagnostic and therapeutic endoscopy. Ability to take targeted mucosal biopsies remains a unique strength of endoscopy as compared to other radiological imaging studies. The present study was carried out to determine the aetiological spectrum of UGIB in Rohilkhand region of India and to compare it with the reported spectrum from other studies done in India and Globe.

METHODOLOGY

- This descriptive cross sectional study was conducted in the emergency department and the department of gastroenterology SRMS-IMS Bareilly.
- The study done was on 100 patients requiring 3 months of period.
- One hundred patients of upper GI bleeding were included.

INCLUSION CRITERIA

- All the adult patients presenting with upper gastrointestinal bleeding in the form of haematemesis or melaena were included.

EXCLUSION CRITERIA

- When there was a source of bleeding in the upper or lower airway
- Patient not fit for endoscopy due to medical problems like severe cardiac or respiratory illness or hemodynamically unstable
- Non-cooperative patients, patients with the advanced hepatic encephalopathy, patients who refused hospital admission for further investigations and treatment.

HISTORY OF

- Diet
- Alcohol
- STDs
- Drug history
- Complete general physical examination was performed. Alimentary, respiratory, cardiovascular, and central nervous system were examined.

PROCEDURE

- Endoscopic evaluation of patients with upper GI bleed was done by the endoscopy department of gastroenterology.
- Procedure was done using 20% Xylocaine throat spray.
- No sedating premedication was used.

RESULTS: A total of 100 patients of UGIB were included in the study. 70 (70%) patients were male and 30 (30%) were female (male:female ratio: 2.33:1). The mean age of the patients was 45.04± 14.8 years (range - 20-85 years). 82% of the patients were in the age group of 20-60 years. Proportion of patients (18%) were in the elderly age group (age >60 years) (Table 1)

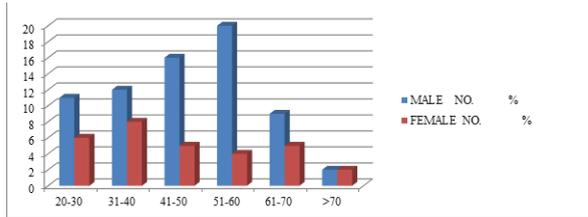
The clinical presentation of the patients (Table 2) was mainly in the form of haematemesis ($n = 36, 36\%$). Melena as presentation was seen in 24 (24%) of patients. Melena and haematemesis 40 (40%).

AGE GROUP IN YEARS	MALE		FEMALE		TOTAL	
	NO.	%	NO.	%	NO.	%
20-30	11	11	6	6	17	17
31-40	12	12	8	8	20	20
41-50	16	16	5	5	21	21
51-60	20	20	4	4	24	24
61-70	9	9	5	9	14	14

>70	2	2	2	2	4	4
TOTAL	70	70	30	30	100	100

Table 1 –Age and Sex wise distribution

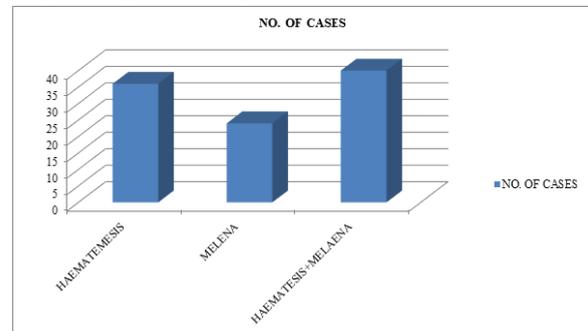
GRAPH 1- Age and Sex wise distribution



CLINICAL PRESENTATION	NO. OF CASES	PERCENTAGE
HAEMATEMESIS	36	36
MELENA	24	24
HAEMATESIS+MELAE NA	40	40
TOTAL	100	100

TABLE 2- CLINICAL PRESENTATION

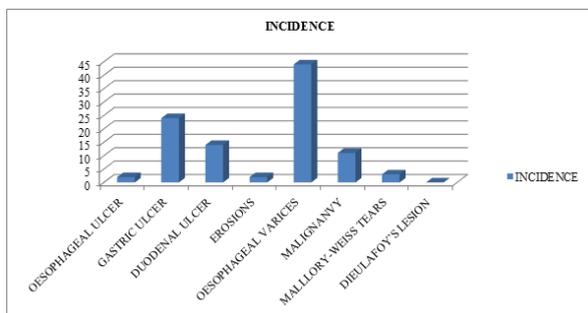
Graph-2 Graph of clinical presentation



The most common aetiology (Table 3) of UGIB was oesophageal varices, seen in 44 (44%) patients. Peptic ulcer were present in 24% (n = 24) patients, whereas duodenal ulcer was present in 14% (n = 14) patients. Other lesions identified were malignancy (n = 11), Mallory weiss tear (n=3), oesophageal ulcer (n=2), and erosion (n=2)

SOURCE	INCIDENCE	PERCENTAGE
OESOPHAGEAL ULCER	2	2
GASTRIC ULCER	24	24
DUODENAL ULCER	14	14
EROSIONS	2	2
OESOPHAGEAL VARICES	44	44
MALIGNANVY	11	11
MALLORY-WEISS TEARS	3	3
DIEULAFOY'S LESION	0	0
TOTAL	100	100

Table 3- ENDOSCOPIC DIAGNOSIS OF CASES

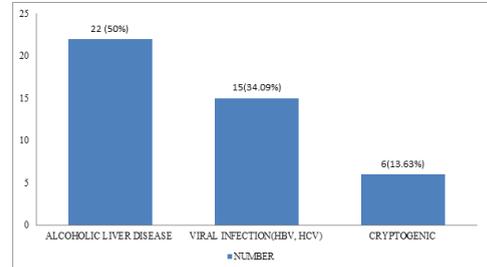


Etiology of variceal bleed in different age groups

In patients variceal bleed accounted for 44% (n = 44), in them alcohol liver disease was accounting 50% (n = 22), viral infection hepatitis B

and hepatitis C related accounting 34.09% (n = 15), and cryptogenic 13.63% (n=6). (Table-4)

CAUSE	NUMBER	PERCENTAGE
ALCOHOLIC LIVER DISEASE	22	50%
VIRAL INFECTION(HBV, HCV)	15	34.09%
CRYPTOGENIC	6	13.63%
TOTAL	44	100%



Discussion: UGIB is one of the common medical emergencies encountered in clinical practice. The etiology of UGIB may vary in different geographical regions. Population-based epidemiological data revealing the current trends in India are sparse. Even fewer studies are available which simultaneously study the outcomes of both variceal and nonvariceal bleed. In this study, we retrospectively analyzed the data of 100 patients from Rohilkhand area who presented in SRMS-IMS with acute UGIB.

Overall, the most common etiology of acute UGIB in our study was oesophageal varices (44%). Peptic ulcer disease was the second most common (24%) etiology of UGIB in this study. This is in tune with the several previous studies (Table 5) which had shown oesophageal varices as the most common etiology of UGIB like in ANAND CS et al., done in 1983 was found oesophageal varices is the common cause UGIB.⁸ Another study done in 2001 RATHI P et al., was also found oesophageal varices is the common cause of UGIB.⁹ In addition, in a recent study Lakhani et al., done in 2008 oesophageal varices was found to be the most common etiology.¹⁰ Another recent study GAJENDRA O et al., In 2009 shows oesophageal varices to be the most common cause of UGIB.¹¹

The trend is similar with regard to the etiology of UGIB. However, this is in contrast to the reported spectra from south and eastern India that create the impression that peptic ulcer bleeding is the most common cause of UGIB in India.^{12, 13, 14} This may be due to the regional differences in the prevalence of chronic liver disease. (Table 6) and of Alcohol addiction in the population cohort

	ANA ND CS et al ⁸	RAT HIP et al ⁹	KRIS HNA KUM AR R et al ¹²	GAJE NDRA O et al ¹¹	LAKH ANI et al ¹⁰	KASH YAP R et al ¹³	SING H SP et al ¹⁴	PRES ENT STUD Y
YEAR OF STUDY	1983	2001	2007	2009	2008	2005	2013	2017
STUDY POPULATIONS	408	398	408	1582	100	111	608	100
SEX RATIO(M:F)	03:01	3.5:1	2.2:1	NA	2.4:1	3.6:1	06:01	2.33:1
HAEMATEMESIS(%)	NA	NA	NA	NA	55	28.8	43.09	36
MELAE NA(%)	NA	NA	NA	NA	32	71.2	95.06	24
BOTH(%)	NA	NA	NA	NA	NA	56.8	41.78	40
DUODENAL ULCER(%)	25	10.8	9.8	17.5	14	43.9	57.57	14

GASTRIC ULCER(%)	5	4.5	8.08	17.5	NA	17.1	1.18	24
OESOPHA GEAL VARICES(%)	45.5	56	33.33	30.97	37	10.8	12.83	44
EROSIVE GASTRITIS(%)	8.5	4.5	43.6	13	14	11.7	1.18	2
MALIGNANCY(%)	NA	0.75	2.4	2	9	7.2	7.89	8

Table-5 Comparison of clinical and aetiological spectrum of UGIB in different study series

	<i>Odisha</i> ¹⁵	<i>Chennai</i> ¹⁶	<i>Kerala</i> ¹⁷	<i>Kolkata</i> ¹⁸
Year of study	2012	2007	2009	2016
Study population (n)	608	408	1582	337
PUD (duodenal ulcer + gastric) (%)	58.75	17.88	35	40.2
Variceal bleed (%)	12.83	33.33	30.97	33.8
Erosive gastritis (%)	1.18	43.6	13	10.6
Malignancy (%)	7.89	2.4	2	2.9

Table-6 Studies of eastern and southern India where peptic ulcer is common etiology of UGIB

Malignancy is the 3rd leading cause with 11% of cases diagnosed by UGIE. In this series, 28% cases were confirmed to be neoplasm causing UGIB by endoscopic biopsy. At endoscopy, three cases had an exophytic growth at cardio-oesophageal junction extending towards 2.5 cm of lesser curvature. All the rest patients had ulcer or exophytic/ulcerative growth at antrum or prepyloric/body region. Clots were adherent to the base of the ulcer.

Singh SP et al (2013)⁹- 7.73%, Lakhani K et al(2008)⁶-9%, Kashyap R et al(2005)⁵ -7.2% Kelley HG et al (1963)¹⁸-4%, Akhtar AJ et al (2001)²⁰- 5.8%, Rathi P et al(2001)⁸-0.75%, Krishnakumar R et al (2007)²¹-2.4%, Gajendra O et al (2009)²²-2%. Multiple reasons may be given for this high incidence of malignancy like increased incidence of H. Pylori infections, increased smoking habit and consumption of salted and smoked food, moreover, more number of patients are referred from Primarily Health Care.

In the present study, Mallory-Weiss tear accounted for 3% of cases which confirms with study of Singh SP et al (2013)¹⁴ -1.8% but not with Webb WA et al (1981)¹⁹-9.8%, Puchner R et al (1995)²³-9%, Akhtar AJ et al(2001)²¹-10%.

In the present study, 2% of cases had only gastric erosion causing UGIB. 1 case had oesophageal erosions associated with some major pathology, 1% cases had duodenal erosions with associated major pathology as the culprit. This is closer to study series of Singh SP et al(2013)¹⁴-1.8%, Rathi P et al (2001)⁹-4%, Webb WA (1981)¹⁹-0.8%, but lower than other studies like Krishnakumar R et al (2007)¹²-43.6%, Lakhani K et al (2008)¹⁰-14%, Enestvedt BK et al (2000-2004)²⁰-18.8%, Anand C.S. et al (1983)⁸-8.5%, Gajendra O et al (2009)¹⁷13%, Kashyap R et al(2005)¹³-11.7%, Akhtar AJ et al (2001)²¹-20%, Dolmans WM(1983)²²-7.4%. Reason may be due to different food habit or alcohol binge drinking or stressful life. The commonest cause of erosion in patients with haematemesis and melaena were NSAID misuse.

CONCLUSION: Oesophageal varies is the major cause of upper GI bleed in our set up reflecting high prevalence of alcoholic liver cirrhosis followed by HBV and HCV infections in Rohilkhand region.

- Out of 100 numbers of consecutive cases, 70 were male and 30 were female. Male to female ratio was 2.33: 1.
- The minimum age of the patients was 22 years and the maximum age was 81 years, with mean age of 45.04 years

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